



# **EarthExplorer Help Documentation**

Version 0.5

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### ***Document History***

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4	July 2011	Updated graphics, fomattting.
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6		

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# I. Introduction

EarthExplorer (<http://earthexplorer.usgs.gov>) provides on-line search, browse display, download of data, and export of metadata to support scientists and other users with access to earth science data from the archives of the United States Geological Survey (USGS). EarthExplorer provides an enhanced user interface using state-of-the art JavaScript libraries, PHP: Hypertext Preprocessor (PHP) and the advanced Oracle spatial engine.

## A. Key Features

Some of the key features in EarthExplorer include:

- A fast, geospatial search engine
- A map viewer for viewing overlay footprints and browse overlays
- A simple, fast graphical user interface
- A data access tool to support search and discovery by you community
- A textual query capability
- Keyhole Markup Language (KML) export capability to interface with Google Earth
- Capability to save or export queries, results, and map overlay for reuse
- Capability for requesting on-demand products
- Access to browse images from standard products
- User authentication service for access to specialized datasets and tools
- Access to Landsat Data Continuity Mission (LDCM) quality band data
- Standard product downloads
- User notification of new acquisitions and available products through subscription services
- Updated software code base supporting JavaScript and PHP

## B. System/Browser requirements

The following are the hardware and software requirements for using EarthExplorer:

- Hardware Requirements – Windows:
  - 233 GHz processor - 2 GHz or better recommended.
  - Minimum of 256MB RAM - 4GB recommended.
  - Minimum of 20GB of free space - 100GB recommended.
  - Display capable of 800x600 with 256 colors, with 32MB of video RAM.
  - Mouse.
  - Keyboard.
- Hardware Requirements – Apple Mac:
  - Intel x86 or PowerPC G3, G4, or G5 - 2Ghz or better recommended
  - Minimum of 256MB RAM, 4GB recommended
  - Minimum of 20GB of free space, 100GB recommended
  - Display capable of 800x600 with 256 colors, with 32MB of video RAM
  - Mouse
  - Keyboard
- Support Handheld and tablet devices via browsers

- Network Requirements:
  - Broadband connection 15Mbps
  - 3G network will impact display speed
- Software Requirements:
  - Operating System: Windows XP, Windows Vista, Windows 7, Windows Server 2000, Windows Server 2003, Windows Server 2008
  - Mac OS X
  - Unix
  - Linux
  - Solaris
- Browsers supported:
  - Internet Explorer (7.x, 8.x, 9.x)
  - Firefox (3.x, 4.x)
  - Chrome (10.x)
  - Opera (10.x)
  - Safari (5.x)

## II. User Interface

You interface of EarthExplorer provides the overall capability for you to interact with the EarthExplorer components and services. The EarthExplorer user interface (Figure 1) is composed of the following key elements:

- Standard USGS Header/Footer elements
- EarthExplorer Menu Bar.
- Body

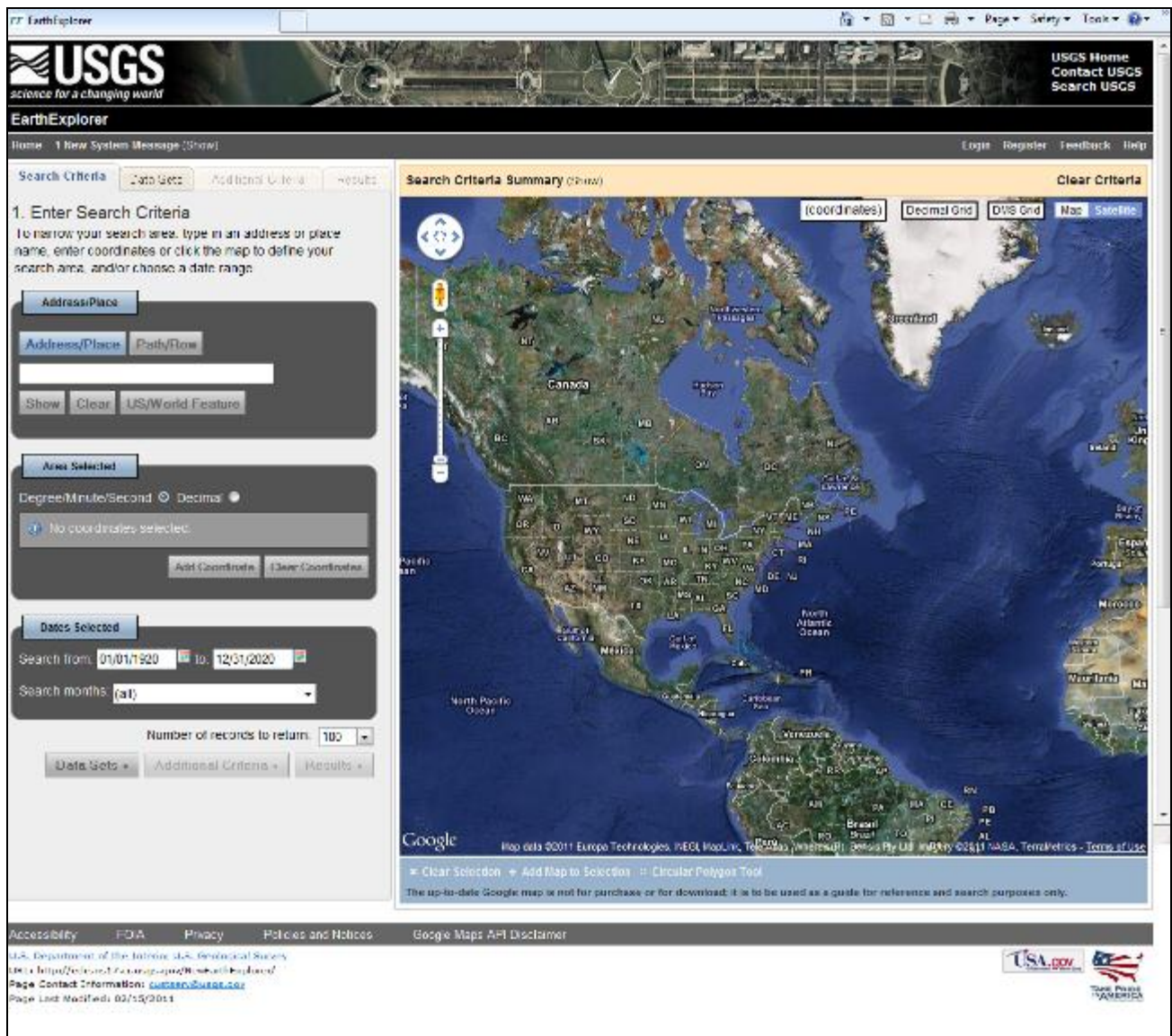


Figure 1 - EarthExplorer User Interface

### A. Header/Footer Elements

The header/footer elements for EarthExplorer are based on the standard guidelines required by the [USGS Visual Identification Policy](#). The EarthExplorer client is compliant with Section 508 guidelines.



## 1. Header

The header for the EarthExplorer client is located at the top of the web page (Figure 2). The header is common across all web pages in Earth Explorer and may be different based on the user role or 'branding' that is applied to the EarthExplorer client for a specific customer.



Figure 2 – Header

Elements of the header include:

- USGS Logo (Upper left corner) reflects the relevance of the Bureau's work in today's world and helps to communicate our purpose to the public.
- USGS Links (Upper right corner) reflect links to the USGS, how to contact the USGS and a link to the USGS search tool.
- The Title Bar is a standard bar describing the web site, in this case, 'EarthExplorer'.
- EarthExplorer Menu Bar

## 2. EarthExplorer Menu Bar

The EarthExplorer menu bar (Figure 3) is directly below the header. The purpose of the menu bar is to supply a common starting point for access to additional functionality, options, and preferences for the EarthExplorer client via dropdown menus.



Figure 3 - EarthExplorer Menu Bar

The common menu items include:

- **Home** – Returns you to a common home starting point within the application.
- **System Message** – Provides links and information regarding system messages.
- **Login** – Provides a link to the EarthExplorer Login/Registration Service.
- **Register** - Provides a link to the EarthExplorer Registration Service
- **Feedback** – Provides a link the feedback form
- **Help** – Provides information about EarthExplorer

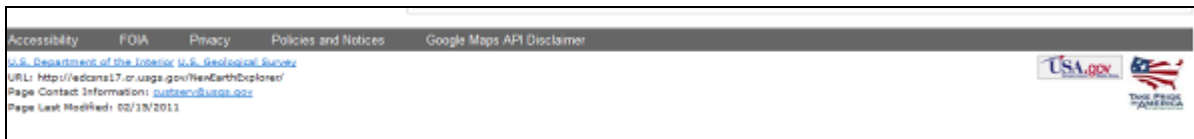
Additional menu bar items will be displayed when you to register or login. Some of these additional features include:

- **Profile** – Provides access to your profile preferences which allow you to customize your profile
- **Save Criteria** – Allows you to save your search criteria for future searches
- **Load Favorite** – Allows you to load/apply your saved search criteria
- **Manage Criteria** – Allows you to modify previously saved search criteria

These options will be described in further details in the EarthExplorer Profile (Section III).

### 3. Footer

The footer (Figure 1) for the EarthExplorer client is located at the bottom of the web page. The footer information is common across all web pages in the EarthExplorer client. The footer may be slightly different based on the user role or 'branding' that is applied to the EarthExplorer client for a specific customer.



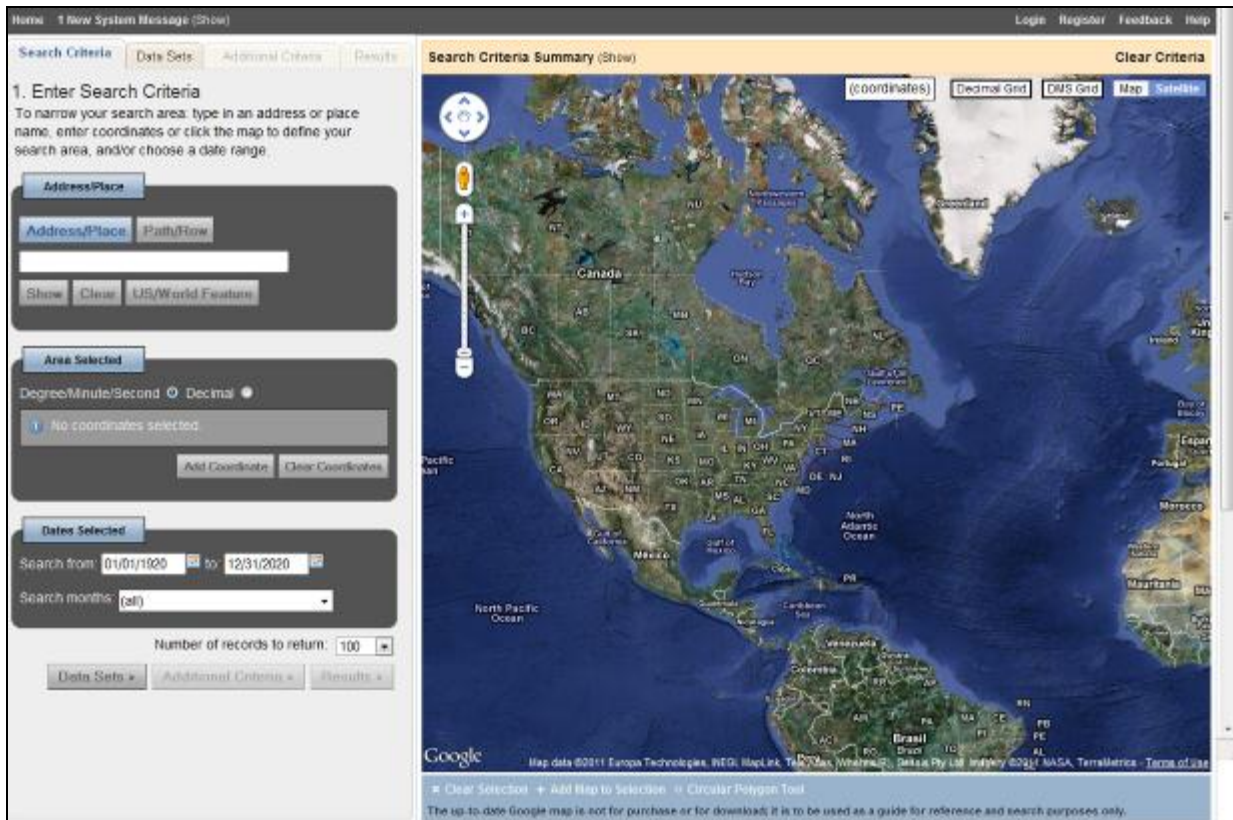
**Figure 4 - Footer**

The common menu items in the footer include:

- Accessibility - Provides a link to the [USGS Accessibility Policy \(Section 508\)](#). The USGS Accessibility Policy ensures that all electronic and information technology developed, procured, maintained, or used by the USGS is accessible to people with disabilities.
- FOIA – Provides a link to the [U.S. Geological Survey Freedom of Information Act \(FOIA\) Electronic Reading Room](#). FOIA requests for a copy of U. S. Geological Survey (USGS) records can be made by any individual or public or private organization other than a Federal agency.
- Privacy – Provides a link to the [USGS Privacy Policies](#). The information provided by this link assists the user concerning privacy policies outlined by the U.S. Geological Survey and the Department of the Interior.
- Policies and Notices - Provides a link to the [USGS Policies and Important Notices](#) web site. This link provides information that describes the principal policies and other important notices that govern information posted on USGS Web sites.
- Google Maps API Disclaimer – Provides a link to the [Google Maps API Disclaimer](#). This link outlines the Google Map API terms and conditions for using the Google Map service.

### B. Body

The body (Figure 5) includes the main capabilities provided by the EarthExplorer client and is composed of the Search Criteria and the Google Map components.



**Figure 5 - Body**

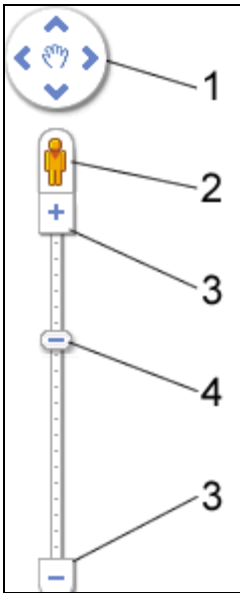
## 1. Search Criteria

The EarthExplorer Search Criteria component is located on the left side of the EarthExplorer body element. The Search Criteria component allows you to enter search criteria, select datasets to query, enter additional criteria, and review results in a tabular window. Additional details on the Search Criteria component are provided in the 'Perform a Search' in section IV.

## 2. Google Map

The Google Map component is located on the right side of the EarthExplorer body element. The Google Map application interface is used to embed Google Maps within the EarthExplorer client.

Before using the map component, you should familiarize yourself with the navigation and location features provided in the Google Map interface used by Earth Explorer.



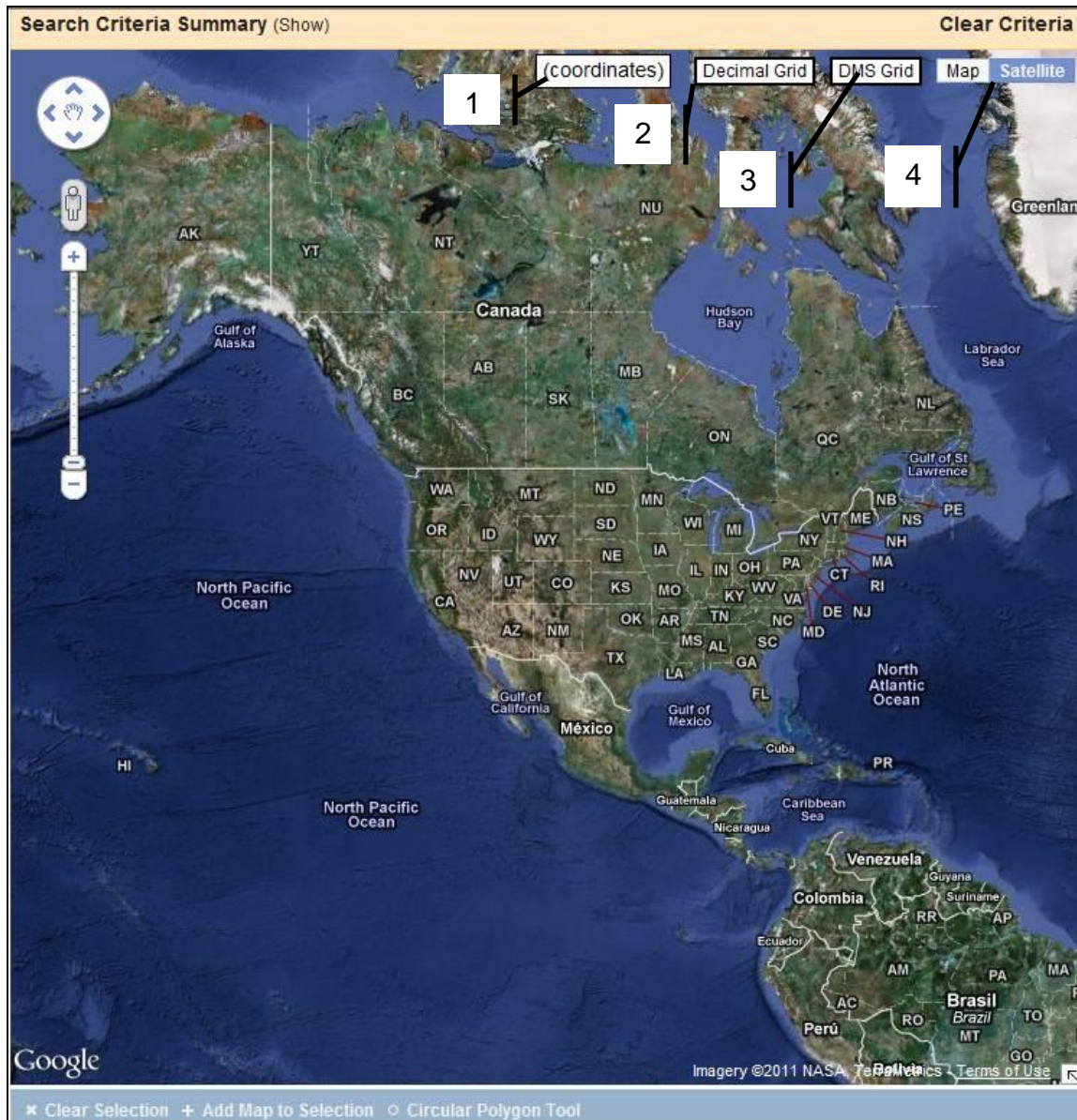
**Figure 6 - Google Map Navigation Controls**

[Navigating in Google Maps](#) (Figure 6) is accomplished with the following controls:

- 1) Pan Control - Click the appropriate arrow to move the view north, south, east or west.
- 2) Street View – Click and drag to go to the street-level view of the area of interest.
- 3) Zoom – Click + to zoom in on the center of the map; Click – to zoom out.
- 4) Zoom slider – Drag the zoom slider up/down to zoom in or out incrementally.
- Pan – Using the left button mouse button, click and hold down the left button and drag the map to the desired location or view.
- Use PAGE UP, PAGE DOWN, HOME, and END for faster scrolling up, down, left, and right, respectively.
- Press CONTROL and + to zoom in or CONTROL and - to zoom out.



The Google Map component provides the following custom location features (Figure 7) to aid the user in locating geospatial data.



**Figure 7 - Custom Location Features**

The following location features are available through Google Maps:

- Coordinates – Coordinate values are updated as the mouse is moved on the map interface
- Decimal Grid – Overlays a decimal degrees grid over the map interface. Click to turn on/off
- DMS Grid – Overlays a Degrees, Minutes, Seconds grid over the map interface. Click to turn on/off
- Map/Satellite – Toggles between Map and Satellite views

- Map View:
  - Terrain – The “Terrain” view shows basic topographic features
- Satellite View:
  - 45° - Zooms to special 45° imagery for certain locations
  - Labels – Displays feature labels

### III. Registration and Profile

Registered users can use all of EarthExplorer's features, including the ability to save their search criteria, download data, and access subscription services. The USGS EarthExplorer system requires you to register to download data. The information gathered from the registration process is not distributed to other organizations and is used to determine trends in data usage and for certain orders. The same login can be used for the [USGS Global Visualization Viewer \(GloVis\)](#) and [USGS Hazards Data Distribution System \(HDDS\)](#) systems.

To ensure privacy and security, all information entered in the EarthExplorer Registration service uses Hypertext Transfer Protocol with Secure Sockets Layer (HTTPS) protocol. This ensures that the information is encrypted from the user's browser to the EarthExplorer application.

The EarthExplorer Registration interface is composed of the following key elements:

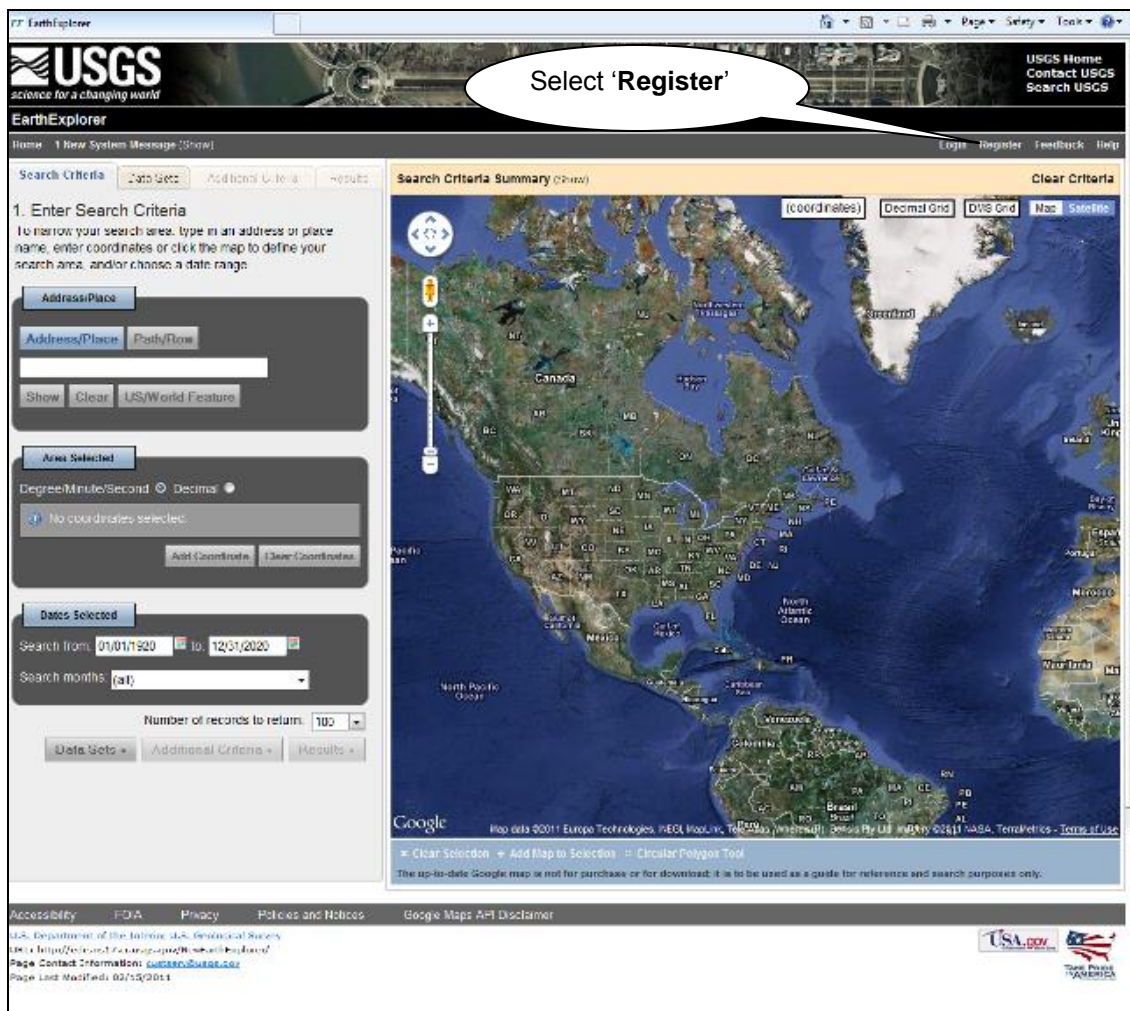
- Registration
- Login
- Profile

User interface features in the registration service:

- Values in **RED** with an asterisk '\*' are required values.
- Selecting the '**Continue**' button performs an edit check - if the values entered pass the edits for that form, the information is saved and the user is advanced to the next page in the registration process.
- An invalid entry will produce a pop up message explaining the error to the user.
- Selecting the '**Cancel**' button will return the user to the initial registration page without saving any information.
- Selecting the '**Reset**' button clears all information from the current form.

#### A. Registration

To register, select the '**Register**' menu item from EarthExplorer menu.



**Figure 8 - Registration**

## 1. Registration Login Page

The Registration process (Figure 8) requires you to create a user name and password, select a secret question, and enter a secret answer. Once you have registered with EarthExplorer, only the '**Login**' process is required.



EarthExplorer - Windows Internet Explorer

EE [https://edcns17.cr.usgs.gov/NewEarthExplorer/register/index?RET\\_ADDR=http://edcns17.cr.usgs.gov/NewEar](https://edcns17.cr.usgs.gov/NewEarthExplorer/register/index?RET_ADDR=http://edcns17.cr.usgs.gov/NewEar)

File Edit View Favorites Tools Help

USGS science for a changing world

EarthExplorer

Home Login Register Feedback Help

1. Login 2. User Affiliation 3. Address 4. Confirmation

The USGS registration service allows you to register and save information that can be used to access a specific USGS site or to place orders for USGS products. Additional features, such as the ability to save search information, may also be available to registered users depending on the site accessed.

To register, please create a user name and password. The information you provide will be secure and not shared with others. Review our [privacy policy](#).

**Login Information**

Username:  You may wish to use your email address for your user name.

Password:  Password must be at least 8 characters long

Confirm Password:

Secret Question:  Pick a secret question

Secret Answer:

Cancel Reset Continue

**Note: All fields are required.**

Accessibility FOIA Privacy Policies and Notices Google Maps API Disclaimer

U.S. Department of the Interior U.S. Geological Survey

URL: <https://edcns17.cr.usgs.gov/NewEarthExplorer/register/index>

Page Contact Information: [custserv@usgs.gov](mailto:custserv@usgs.gov)

Page Last Modified: 02/15/2011

USA.gov TAKE PRIDE IN AMERICA

Trusted sites | Protected Mode: Off

**Figure 9 – Registration Login**

The Registration Login page (Figure 9) requires you to enter the following values:

- Username **(Required)** – Enter your preferred username
- Password **(Required)** – Enter in a password value. The password must be at least 8 characters long
- Confirm Password **(Required)** – Enter the password value entered in the previous password field
- Secret Question **(Required)** - You must select a secret question when you register. If you forget your password, answering your secret question will allow you to change your password easily.
  - Select a question that can be answered easily but that will be difficult for others to guess. Secret questions should be treated like any other confidential information—and not shared.
- Secret Answer **(Required)** – Enter in the appropriate response to the selected secret question.

**Cancel:** Returns you to the initial registration page without saving any information

**Reset:** Clears all information from the form.

**Continue:** Performs a check – if the values entered are valid, the information is saved and you are advanced to the User Affiliation/Data Usage form.

## 2. User Affiliation/Data Usage Information Page

The User Affiliation/Data Usage Information page (Figure 10) allows you to enter their user affiliation and how the data will be used. This information is used to gather statistics on how the data is used and what organizations are using it.

The screenshot shows a web browser window titled "EarthExplorer - Devmast - Windows Internet Explorer". The address bar shows the URL "https://edcns16.cr.usgs.gov/NewEarthExplorer\_devmast/register/useraffiliation". The page features the USGS logo and navigation links like "Home", "Reset", "Login", "Register", "Feedback", and "Help". The main content area is titled "User Affiliation/Data Usage Information" and includes instructions: "Enter your user affiliation and data usage information. This information helps us do a better job of addressing your needs." The form contains several sections: "User Affiliation (Should reflect your eligibility to receive data, not your home organization)" with a required field for "Affiliation" (a dropdown menu); "Data Usage (used to determine how products are being used and what to offer in the future):" with a required field for "Primary Data Usage" (a dropdown menu) and a "Secondary Usage" section with a grid of checkboxes for various categories (Agriculture, Climate Change, Cryosphere, Ecosystem Studies, Education, Emergency Response, Energy, Fire, Forestry, Geology, Human Ecology, Human Health, Insurance, International Land Issues, Land Change, National Security, Natural Resources, Planning, Socioeconomics, Telecommunications, Terrestrial Monitoring, Visualization, Water); and an "Other Use:" section with a text box. At the bottom of the form are "Cancel", "Reset", and "Continue" buttons, and a note "\* = Required Field".

Figure 10 - User Affiliation/Data Usage Form

The User Affiliation/Data Usage (Figure 10) form identified the affiliation you are associated with and the primary and secondary uses of the data. The USGS uses this information to determine data usage trends to provide target specific user groups. This page requires you to enter the following values:

- Affiliation (**Required**) –indicates the organization you are most affiliated with. Based on the value selected, additional information may be required, such as:
  - Department
  - Agency
- Primary Data Usage (**Required**) – indicates the primary use of the data.
- Secondary Usage – indicates other uses of the data.
- Other Use - If none of the secondary values match, enter other uses of the data in the text box.

### 3. Address page

The Address page (Figure 11) is used to enter in address information. The address information is used only for contact information. Some products require shipping information for delivery of products. Address information is not shared with any commercial or other government agencies. Please refer to the [USGS/DOI Privacy Policy](#) concerning how this information is used.

EarthExplorer - Devmast - Windows Internet Explorer

https://edcns16.cr.usgs.gov/NewEarthExplorer\_devmast/register/addresscontact

File Edit View Favorites Tools Help

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EarthExplorer - Devmast

Home Reset

USGS Home Contact USGS Search USGS

Login Register Feedback Help

1. Login 2. User Affiliation 3. Address 4. Confirmation

**Steps for entering Address information** (We do not share any information you enter here!)

Enter the address where we can contact you.  
Provide Billing and Shipping addresses only if different from your Contact Address.  
Click the "Submit Address Information" button when you are done.

Contact [Customer Services](#) if you are a business partner or if you qualify for special ordering options.

**Contact Information**

\*First Name:

\*Last Name:

Company/Organization:

\*Address 1:

Address 2:

\*Country:

\*City:

State/Province:  Example: SD, South Dakota, sd, south dakota

\*Zip/Postal Code:

\*E-mail:

Alternative E-mail:

\*Telephone:  Example: 6055946885, 605 594 6885, 605-594-6884. (Phone # used only if we have questions about an order)

Fax:

Cancel Reset Continue

\* = Required Field

Accessibility FOIA Privacy Policies and Notices Google Maps API Disclaimer

Done

Trusted sites | Protected Mode: Off

Figure 11 - Address

The Address page requires you to enter the following values:

- First Name (Required) –First Name of the user.
- Last Name (Required) –Last Name of the user.
- Company/Organization –Company or organization the user is affiliated with.
- Address 1 (Required) – Address line 1 of the user.
- Address 2 – Address line 2 of the user.
- Country (Required) – Select the country the user is from.
- City (Required) – City where the user resides.
- State/Province (Required) – State/Province where the user resides.
- Zip/Postal Code (Required) – Zip code or postal code of the user.

- E-mail (**Required**) –email address of the user.
- Alternative E-mail – Additional email address for the user.
- Telephone (**Required**) – Primary telephone number of the user.
- Fax –Fax number of the user.

#### 4. Confirmation

The Confirmation page (Figure 12) is displayed after successful registration. Clicking on the 'Return to the page where I registered' returns you to the page you started the registration process.

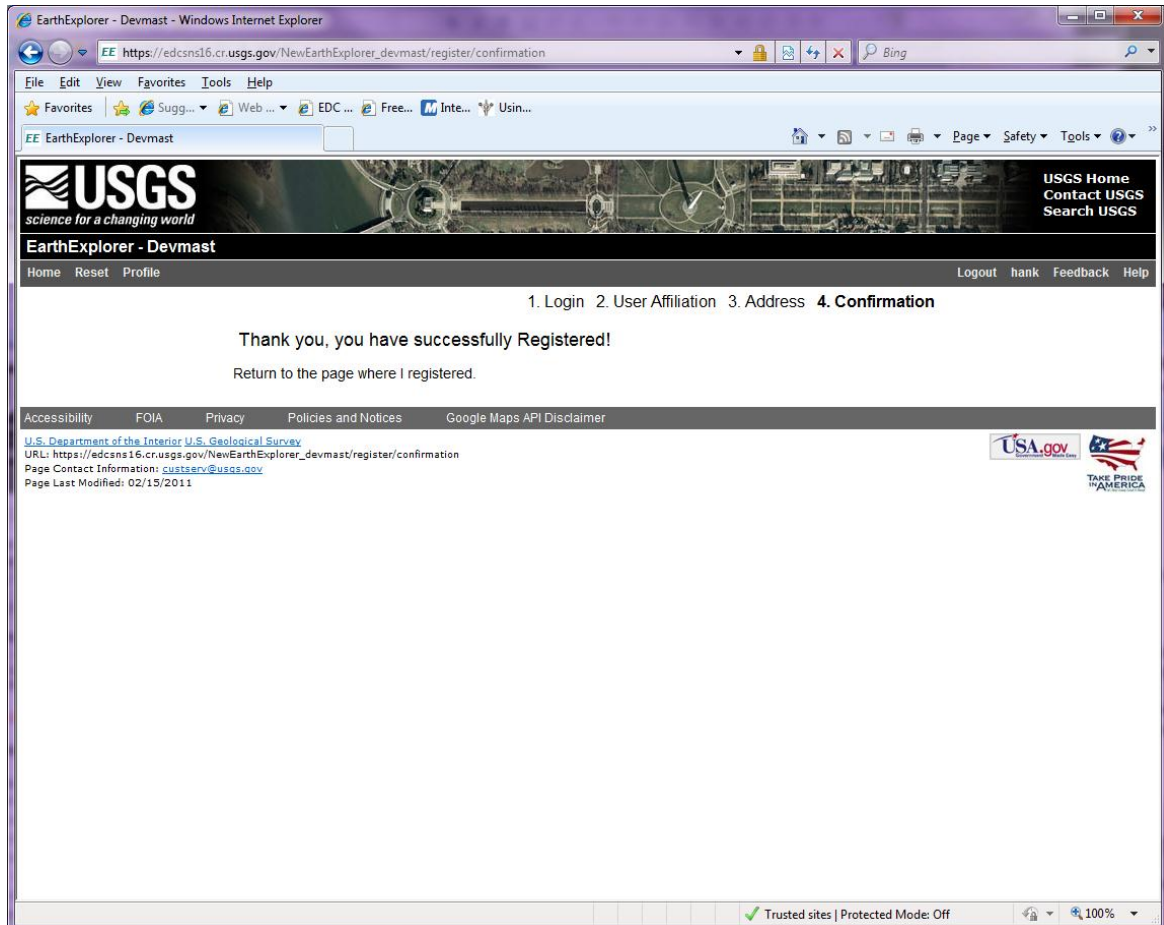


Figure 12 - Confirmation Page

After registering for the first time, you are automatically logged into EarthExplorer.

## B. Login

The Login page allows you to login to EarthExplorer. A registered user can use all of EarthExplorer's features, including the ability to save search criteria, download data, and access subscription services.

### 1. Login Process

- To Login, select the '**Login**' menu item from EarthExplorer menu (Figure 13). (Note: You are automatically logged in when you register for the first time).



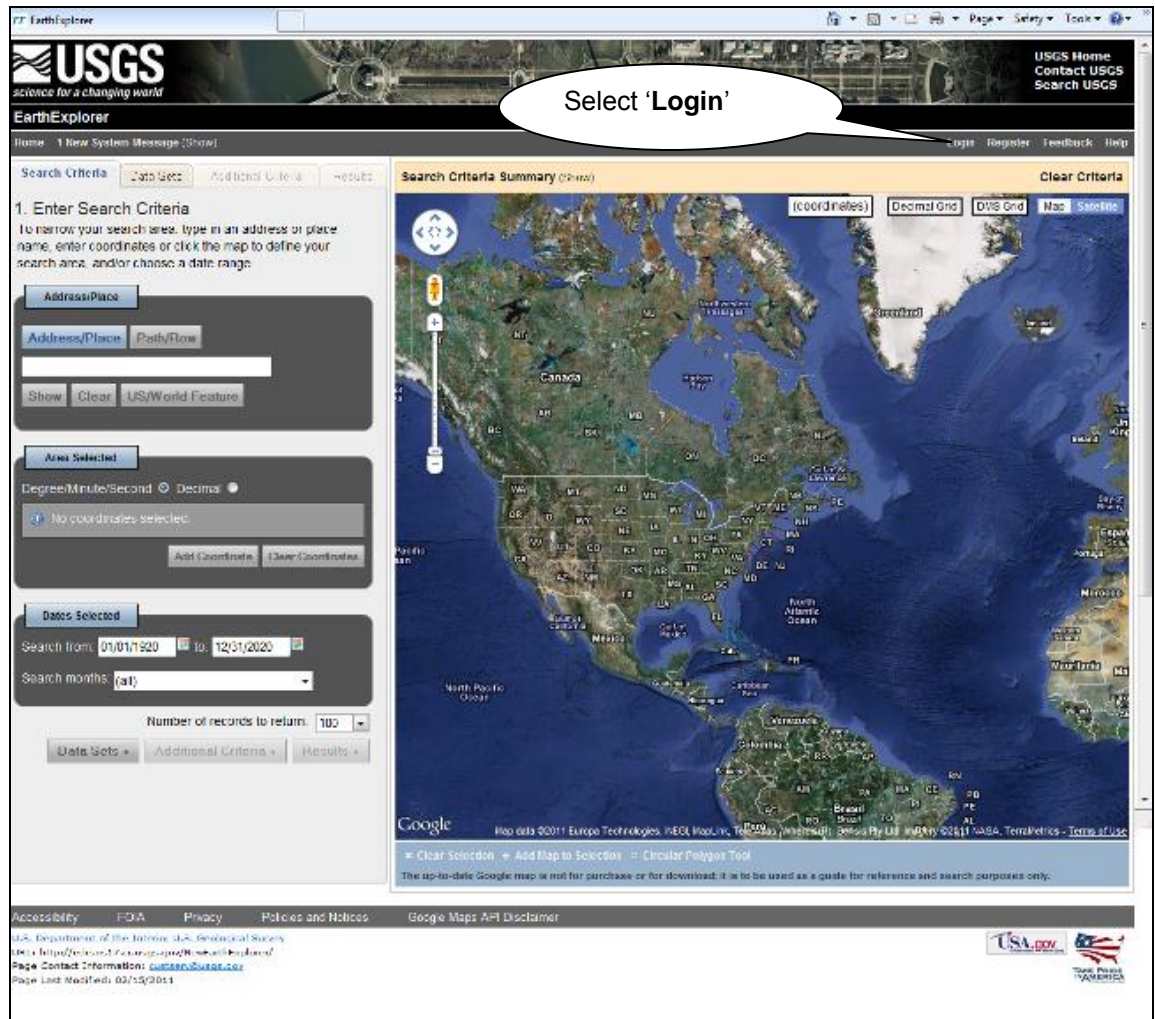


Figure 13 - Login

b. Enter Username and Password then Click the 'Sign In' (Figure 14).

When you sign in using your user name and password, information in your profile can be used to access a specific USGS site or to place orders for USGS EROS products.

**Sign in using your USGS registered username and password**

Username:

Password:

[Forgot your password?](#)

Figure 14 - Login/Password

- c. Click the [Forgot your password?](#) to receive directions for updating your password.
- d. Once you are logged-in, additional items will appear in the main menu bar:

## 2. Logout Process

To Logout of EarthExplorer, click '**Logout**' in the EarthExplorer menu.

## C. Profile

The Profile menu option allows you to modify your profile information.

### 1. Profile Home

The 'Profile Home' option allows the user to modify user profile information (Figure 15). The following user profile options that can be modified are:

- Change Password – allows you to view and change your password
- Edit Secret Question – allows you to view and change your secret question
- Contact Information – allows you to view and modify your contact information
- Billing Address - allows you to view and modify your billing information
- Shipping Address - allows you to view and modify your shipping information
- User Affiliation – allows you to view and modify your user affiliation

EarthExplorer - Devsys

Home Profile Logout Feedback Help

**Profile Menu**

- Profile Home
  - Password
  - Secret Question
  - Contact Address
  - Billing Address
  - Shipping Address
  - User Affiliation
- Interface Options
  - Data Sets
  - Sort Order
  - Metadata View
- Saved Criteria
- Standing Request
- Order Tracking

**Login Information**

Username: \_\_\_\_\_

Password: \_\_\_\_\_

**Change Password**

**Secret Question Information**

Secret Question: What is your school mascot?

Secret Answer: \_\_\_\_\_

**Edit**

Contact Address Information	Billing Address Information	Shipping Address Information
First Name: _____	First Name: _____	First Name: _____
Last Name: _____	Last Name: _____	Last Name: _____
Company: _____	Company: _____	Company: _____
Address 1: _____	Address 1: _____	Address 1: _____
Address 2: _____	Address 2: _____	Address 2: _____
City: _____	City: _____	City: _____
State/Province: _____	State/Province: _____	State/Province: _____
Postal Code: _____	Postal Code: _____	Postal Code: _____
Country: _____	Country: _____	Country: _____
Email: _____	Email: _____	Email: _____
Alt. Email: _____	Alt. Email: _____	Alt. Email: _____
Telephone: _____	Telephone: _____	Telephone: _____
Fax: _____	Fax: _____	Fax: _____
<b>Edit</b>	<b>Edit</b>	<b>Edit</b>

**User Affiliation / Data Usage Information**

Affiliation Name: US Federal Government - Executive Branch

Department Name: Department of the Interior (DOI)

Agency Name: Geological Survey (USGS)

Primary Usage: \_\_\_\_\_

Secondary Usages: None selected.

**Edit**

Figure 15 - Edit User Profile

You can also click the edit to modify the desired information.

## 2. Interface Options

The 'Interface Options' page allows you to modify information associated with the overall system interface. The following options modify the overall Earth Explorer interface:

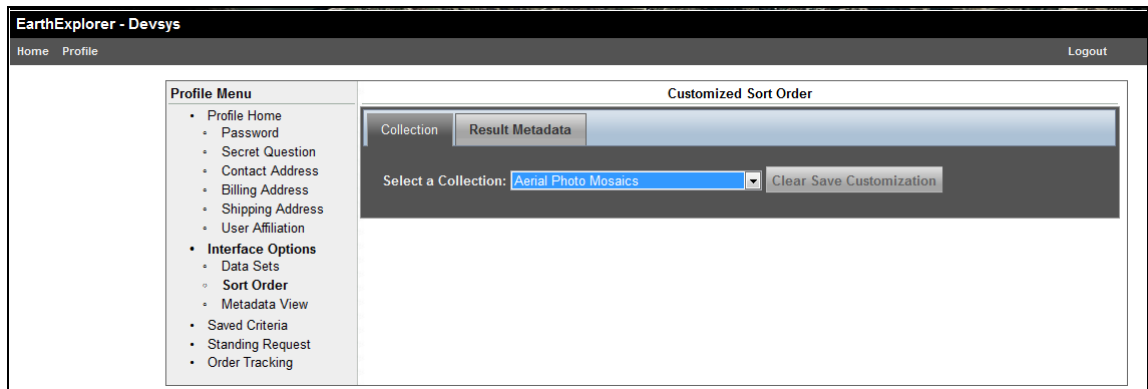
- Interface options (Figure 16) – allows you to modify Tool Tips, number of metadata results per page, and other specific system options. Some options can only be modified by the application administrator.

Figure 16 - Interface Options

b. Data Sets page (Figure 17) – allows you to modify the list of datasets that are shown in the Data Sets Component.

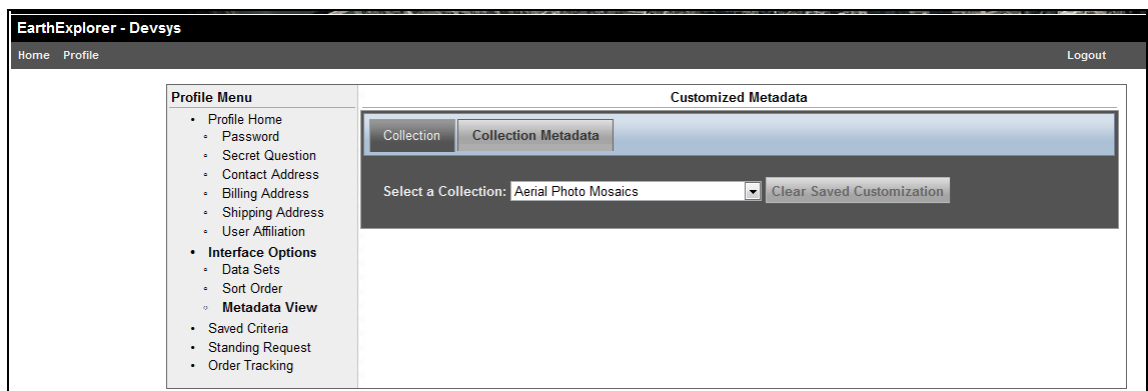
Figure 17 - Data Set List

c. Sort Order page (Figure 18) – allows you to modify the sort order for each dataset.



**Figure 18 - Sort Order**

- d. Metadata View page (Figure 19) – allows you to modify the detailed metadata view for each dataset.



**Figure 19 - Metadata View**

### 3. Saved Criteria

The 'Saved Criteria' (Figure 20) option allows you to modify the saved criteria options from previous searches.





**Figure 20 - Saved Criteria**

In the example above, the search criteria was saved with the name 'Search\_Site\_1'. Any information can be entered when saving the search criteria.

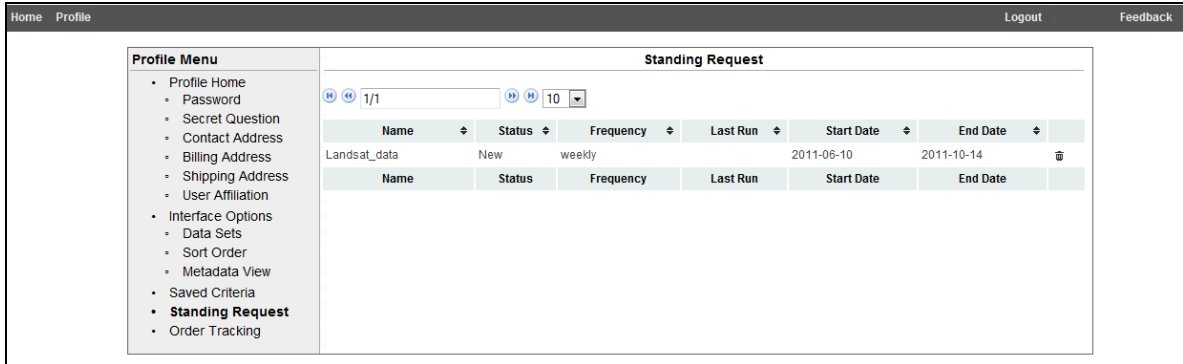
- The star 🌟 icon saves the search criteria to the user's favorites list



- The load criteria icon  loads the search criteria automatically to EarthExplorer
- The delete  icon removes the search criteria from the saved criteria

#### 4. Standing Request

Click the **‘Standing Request’** (Figure 21) to view a list of standing requests you have entered.



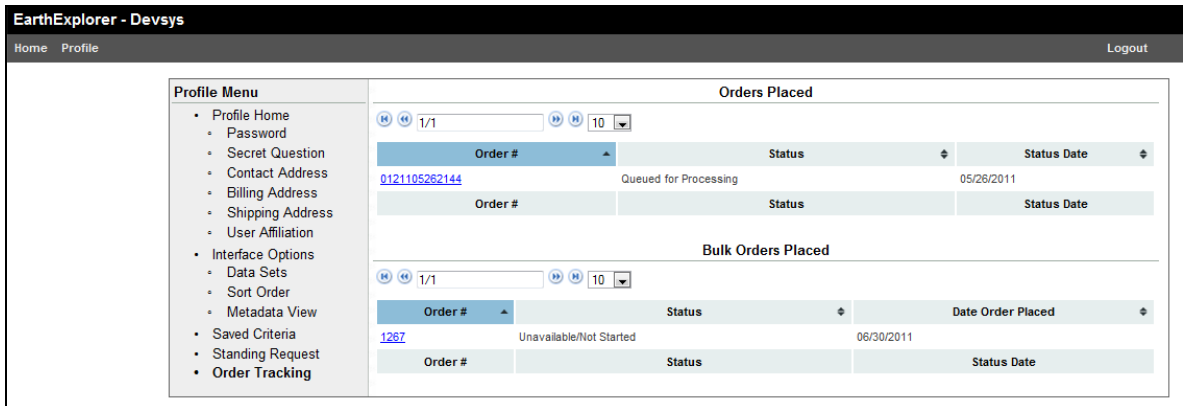
Name	Status	Frequency	Last Run	Start Date	End Date
Landsat_data	New	weekly		2011-06-10	2011-10-14

Figure 21 - Standing Request

The Standing Request function notifies you via email when a new acquisition matches the search criteria for the requested dataset. You will then be able to review metadata and browse for the scenes that are returned. See Section IV, D, 3, Standing Request, for more details on the Standing Request function.

#### 5. Order Tracking

Click the **‘Order Tracking’** (Figure 22) option to display the list of orders you have placed.



Order #	Status	Status Date
0121105262144	Queued for Processing	05/26/2011

Order #	Status	Date Order Placed
1267	Unavailable/Not Started	06/30/2011

Figure 22 - Order Tracking

Clicking on the order number will show the order details, the products ordered, and the current status of each item ordered.

## IV. Perform a Search

EarthExplorer allows you to search, download and order data held in USGS archives through a number of query options. EarthExplorer uses tabs in the application to facilitate stepping through each portion of the search process. The EarthExplorer search process is broken down into four (4) main areas (Figure 23):

- **Search Criteria Tab** – Provides the interface for entering various search options.
- **Data Sets Tab** – Provides the interface for selecting the data sets the user is interested in searching.
- **Additional Criteria Tab** – Provides an interface for entering additional search criteria specific to the selected datasets.
- **Results Tab** – Provides the interface for displaying a textual and graphical view of the query results.



Figure 23 - EarthExplorer Search Tabs

### A. Search Criteria tab

The Search Criteria tab allows you to enter your search criteria for your area of interest. You have the option of either entering your location criteria via the textual information component or with the Google Map interface. The search criteria options include:

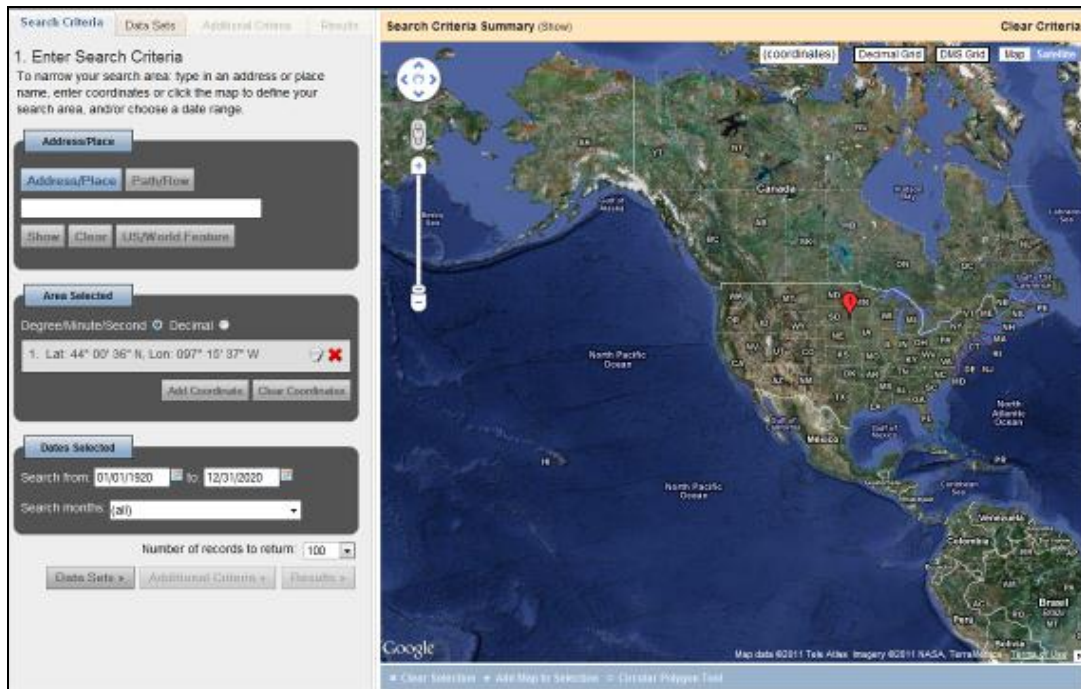
- Google Map Interface – Enter your area of interest through the Google Map interface
- Address/Place – Enter an address or place name
- Area Selected – Enter coordinates to define your area of interest. Area selected is updated when you select an area on the map or when you enter an address or place name
- Dates Selected – Enter a date or date range
- Number of records to return – Modify the number of scenes that will be returned from a search.

#### 1. Enter Area of Interest Search using Google Map Interface

Using the Google Map interface allows a user familiar with Google Maps to enter their geospatial area of interest using their mouse or other pointing device.

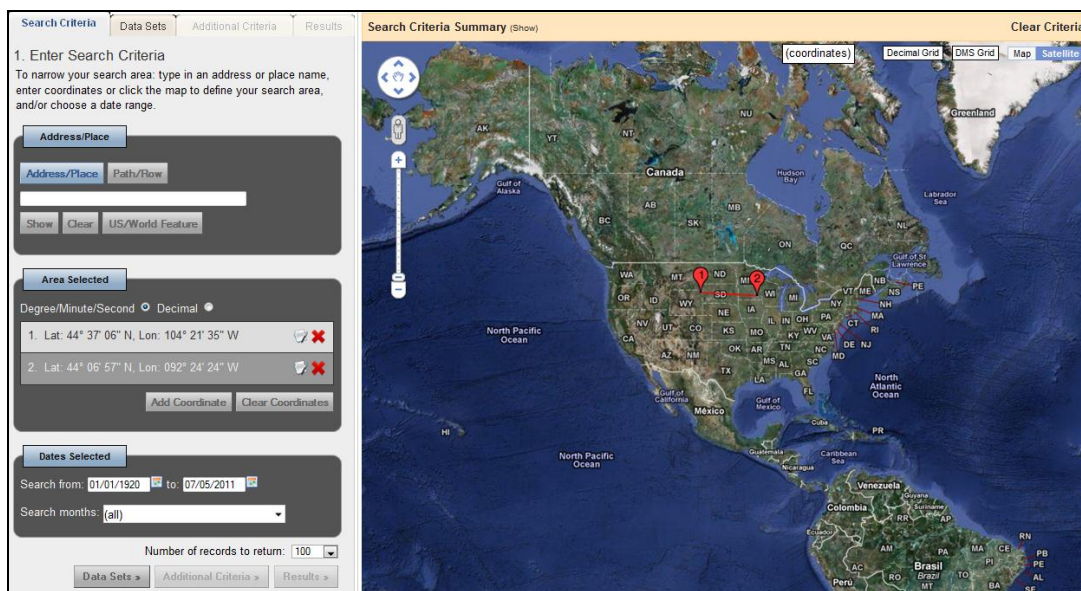
Options for entering location criteria include:

- a. Define a single point search (Figure 24) – Click an area on the map once using the mouse pointer to define a single point search. The latitude and longitude of the point selection is displayed in the 'Area Selected' box.



**Figure 24 - Point Search**

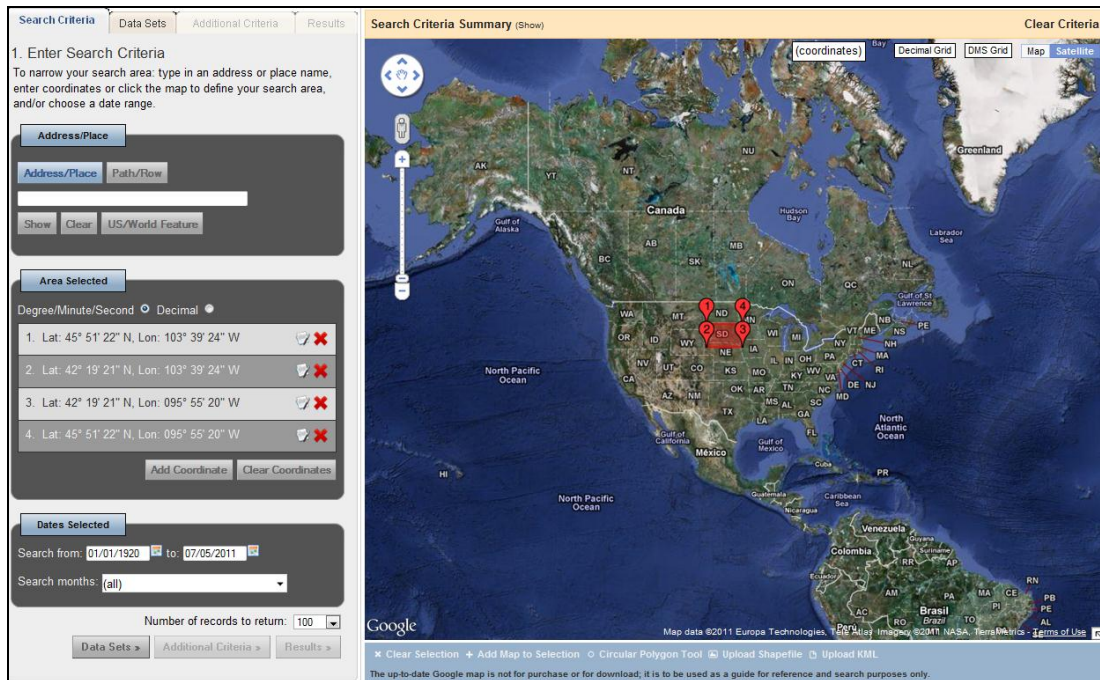
- b. Define a line search (Figure 25) - Select two points on the map the mouse pointer to define a line segment to perform a line search. The latitude and longitude of the two points selected are displayed in the 'Area Selected' box.



**Figure 25 - Line Search**

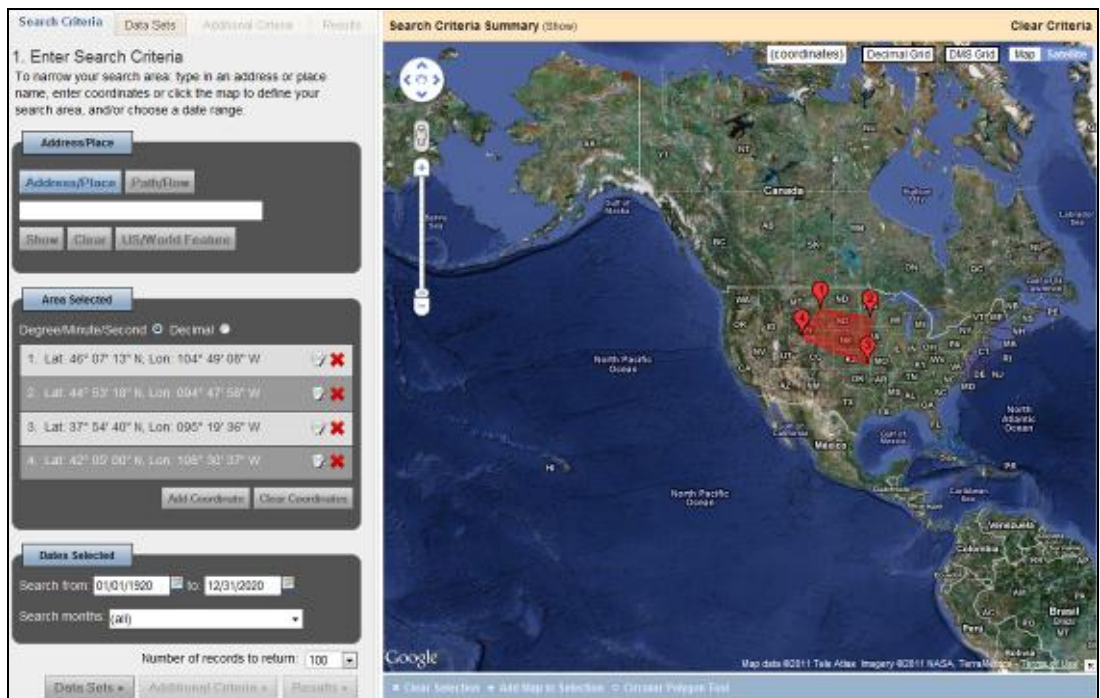
- c. Define a rectangle search (Figure 26) – Press the Shift key after starting your selection, and continue to depress the shift key until the correct rectangle or square is defined. This defines the constraints of the rectangle/square. Note that if you press the Shift key before starting to make the selection, the resulting selection will be added to the existing selection. The latitude and longitude of the four points selected are displayed in the 'Area Selected' box. The rectangle can be modified by clicking one of the numbered points on the map and dragging the point to a new location.





**Figure 26 - Rectangle Search**

- d. Define a polygon, or click multiple times to define an area (Figure 27). As each point of the polygon is selected, the latitude and longitude of the polygon that is defined on the map is displayed in the 'Area Selected' box. The rectangle can be modified by clicking one of the numbered points on the map and dragging the point to a new location.



**Figure 27 - Polygon Search**

- e. Click the 'Circular Polygon Tool' at the bottom of the Google Map interface (Figure 28). Define a circle by clicking two points on the map (Figure 29). After selecting the two points, the circle radius can be modified by clicking one of the points and dragging it to a new location. The coordinates of the points defining the circle are displayed in the 'Area Selected' box. Click "Point Polygon Tool" to turn off the Circular Polygon tool.

✕ Clear Selection + Add Map to Selection ➤ **Circular Polygon Tool**

Figure 28 - Circular Polygon Tool

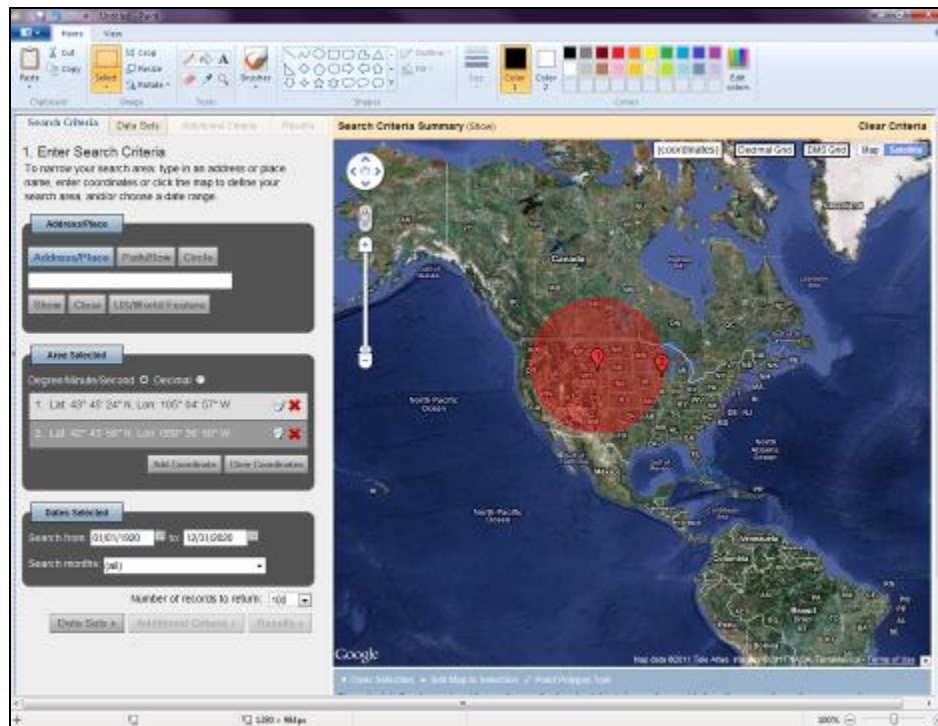


Figure 29 - Example circle area of interest

f. Clear Selection (Figure 30) – Clears the search criteria from the map

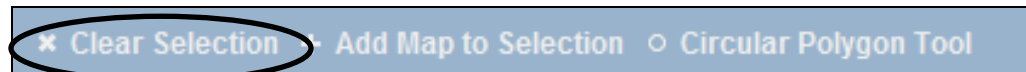


Figure 30 - Clear Selection

g. Add Map to Selection (Figure 31) – Adds the current map view as the area of interest.



Figure 31 - Add Map to Selection

The color of the screen changes to indicate to the user that the area displayed on the map is the area of interest (Figure 32). The latitude and longitude of the map extent is displayed in the 'Area Selected' box.

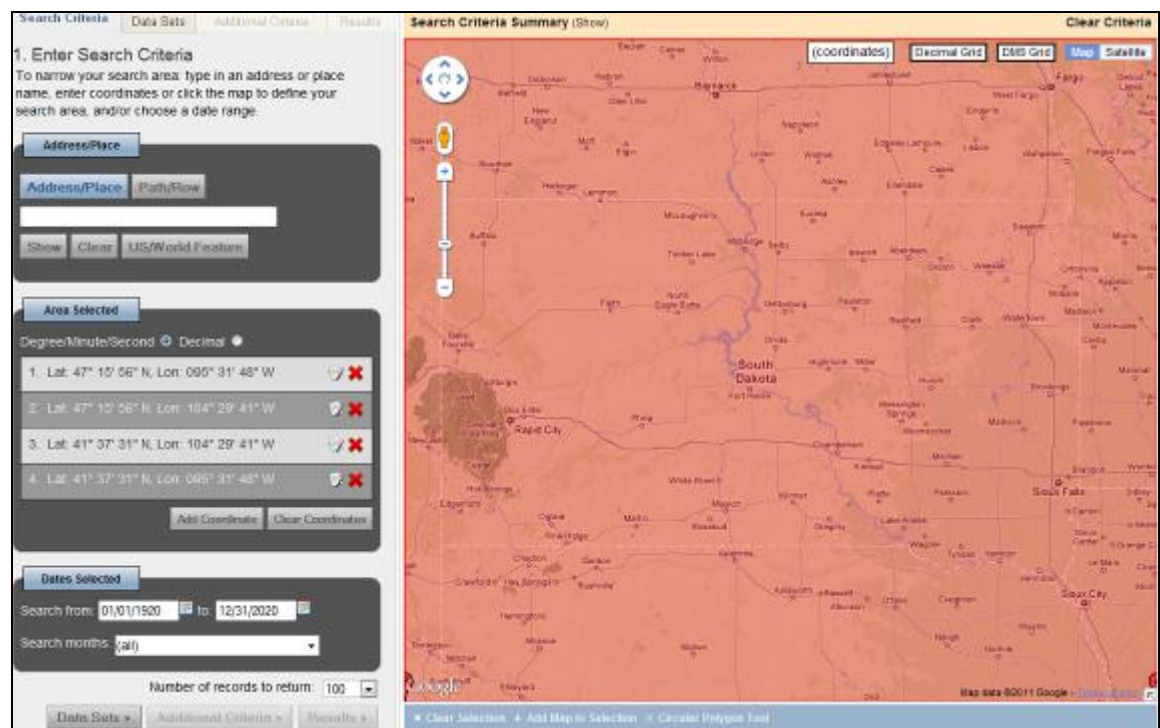


Figure 32 - Add Map to Selection Example

The coordinates of the map extent are displayed in the 'Area Selected' box.

## 2. Enter Search using Address/Place

The Address/Place subcomponent allows you to enter a specific address, latitude, longitude, United States or World feature, or Landsat WRS Path/Row.

- a. Address – Enter a specific address, example - Address: 47914 252nd St, Sioux Falls, SD (Figure 33). Press enter or Click 'Show' to display the location on the map and show the coordinate in the 'Area Selected' subcomponent (Figure 34).



### 1. Enter Search Criteria

To narrow your search area, type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

Address/Place

Address/Place

Path/Row

47914 252nd St, Sioux Falls, SD

Show

Clear

US/World Feature

Figure 33 - Enter Address

Search Criteria

Data Sets

Additional Criteria

Results

### 1. Enter Search Criteria

To narrow your search area, type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

Address/Place

Address/Place

Path/Row

47914 252nd St, Sioux Falls, SD

Show

Clear

US/World Feature

Area Selected

Degree/Minute/Second

Decimal

1 Lat: 43° 43' 57" N, Lon: 096° 37' 42" W

Add Coordinates

Clear Coordinates

Dates Selected

Search from

11/01/1920

to

12/31/2020

Search months

all

Number of records to return:

100

Data Sets >

Additional Criteria >

Results >

Search Criteria Summary (Show)

Clear Criteria

(coordinates)

Decimal Grid

DMS Grid

Map

Satellite

Clear Selection

Add Map to Selection

© 2021 Google

Figure 34 - Enter Address Location

- b. Latitude/Longitude – Enter a specific latitude/longitude, example, 43 43' 57" N, 096 37' 42" W (Figure 35). Press enter or Click 'Show' to display the location on the map and show the coordinates in the 'Area Selected' subcomponent (Figure 36).

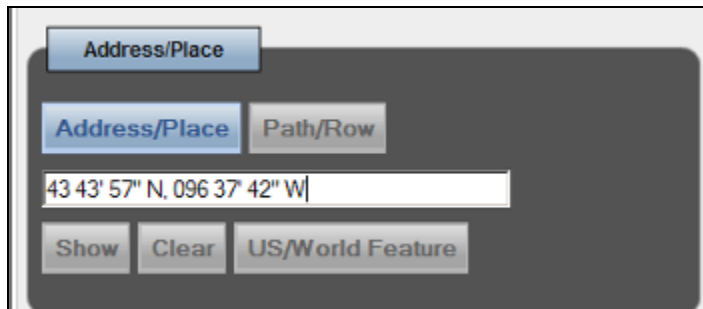


Figure 35 - Enter Latitude/Longitude

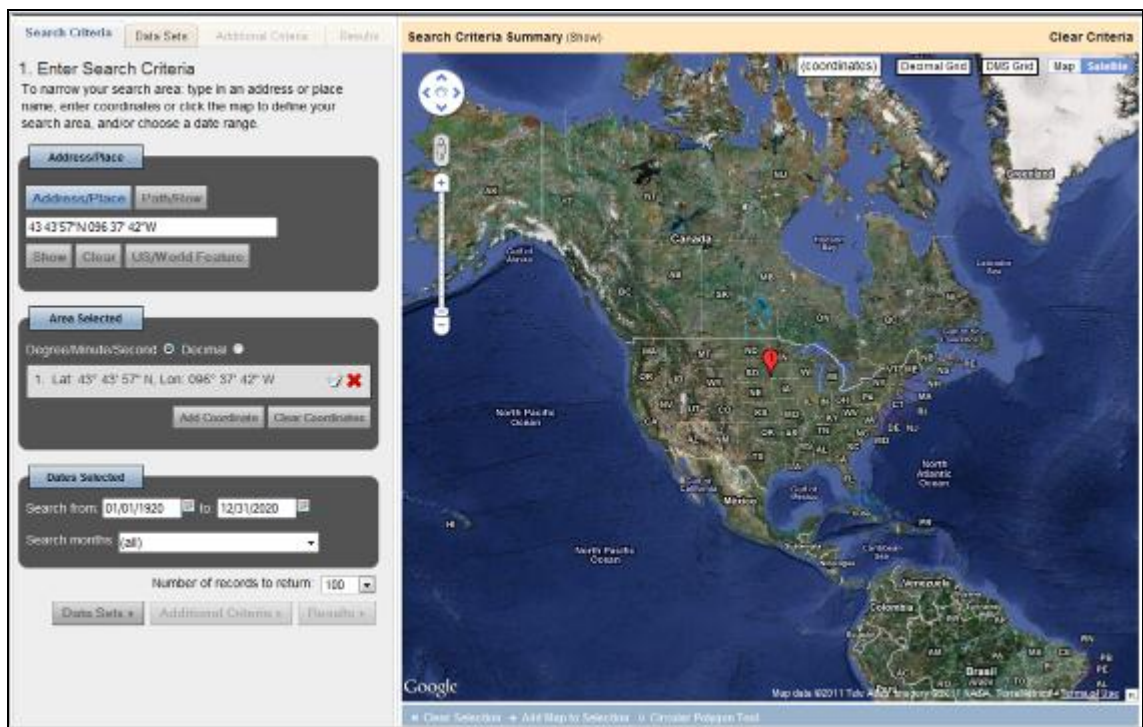


Figure 36 Enter Latitude/Longitude Location



- c. Place Name – Enter a place name. For example, enter Mount Rushmore (Figure 37) and press enter or Click ‘Show’ to display the location on the map and show the coordinate in ‘Area Selected’ (Figure 38).

**Figure 37 - Place Name**

If users you are not completely sure of a specific location, entering a placename and pressing Enter (or Clicking ‘Show’), will display a list of possible options. For example, entering EROS, then selecting clicking ‘Show’ displays a list of possible places that match EROS.

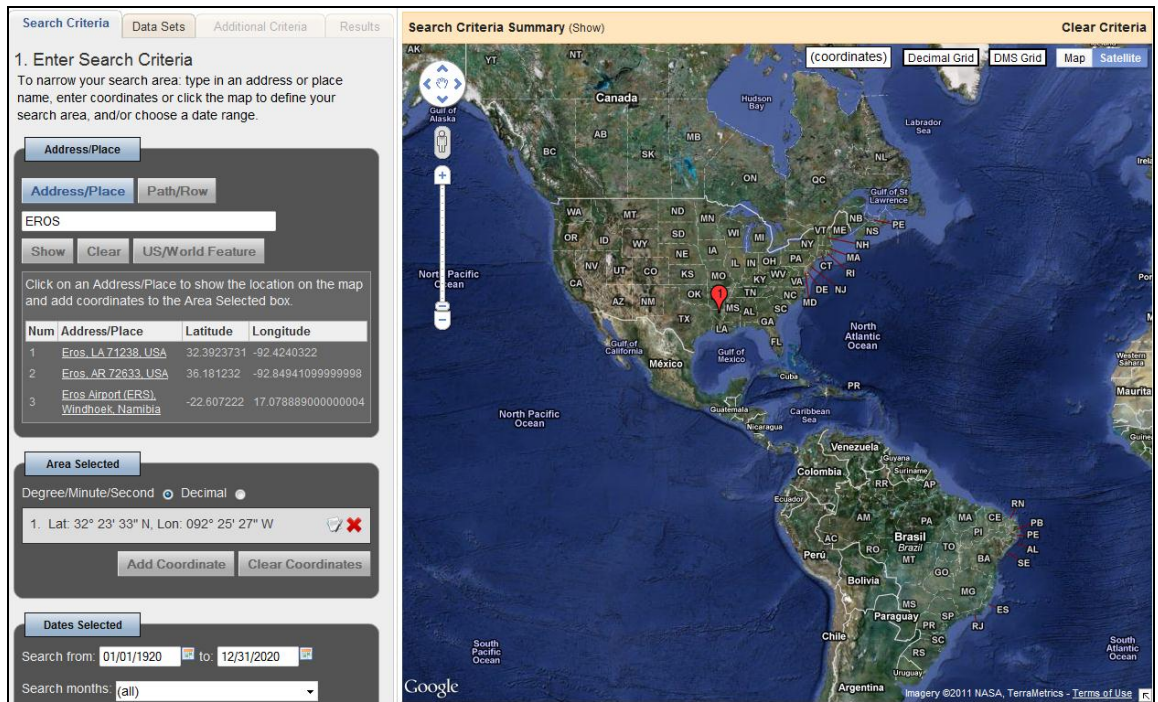
**1. Enter Search Criteria**  
To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

Click on an Address/Place to show the location on the map and add coordinates to the Area Selected box.

Num	Address/Place	Latitude	Longitude
1	Eros, LA 71238, USA	32.3923731	-92.4240322
2	Eros, AR 72633, USA	36.181232	-92.84941100000003
3	Eros Airport (ERS), Windhoek, Namibia	-22.607222	17.97889900000003
4	Eros, Guanajuato, Mexico	21.1498856	-101.73268849999999
5	Eros, Heriotesbaai, Namibia	-22.1315018	14.290271599999992
6	Eros, La Paloma, Uruguay	-34.8665129	-54.1533541
7	Eros, Saltillo, Coahuila, Mexico	25.4508401	-101.01379910000003

**Figure 38 - Place Name - Multiple Options**

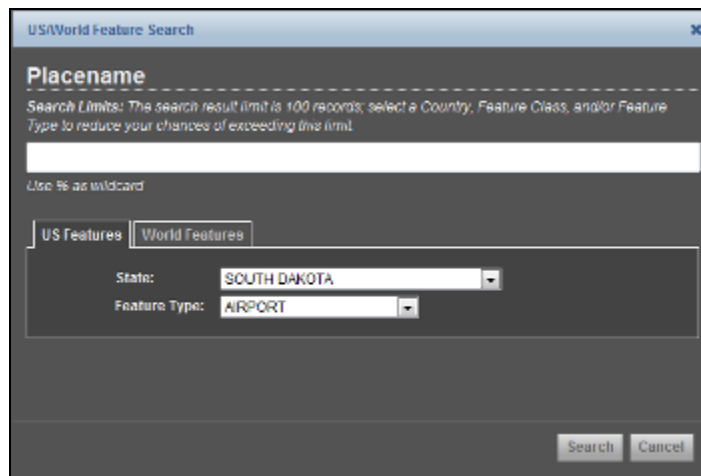
Clicking an item in the Address/Place list shows the location on the map (Figure 39).



**Figure 39 - Place Name - Multiple Option - Selected Place**

- d. US/World Feature – The US/World Feature option allows you to select either a United States or World Feature.

Clicking the US/World Feature button displays the US/World Feature Search dialog box. Enter a State/Country, Feature Class, or Feature type (Figure 40).



**Figure 40 - US Feature Place name Search**

For example, selecting 'US Features' and selecting 'South Dakota' from the State pull down and then selecting 'Airport' from the Feature full down, will display a list of all airports in South Dakota (Figure 41).

US/World Feature Search

US Features | World Features

State: SOUTH DAKOTA

Feature Type: AIRPORT

**Results**

Placename	Type	Region	Latitude	Longitude
SKY RANCH FOR BOYS AIRPORT	AIRPORT	SOUTH DAKOTA	45.502441	-103.993707
BELLE FOURCHE MUNICIPAL AIRPORT	AIRPORT	SOUTH DAKOTA	44.733224	-103.859237
MITCHELL'S STRIP AIRPORT	AIRPORT	SOUTH DAKOTA	44.467502	-103.767379
BRUCH AIRFIELD	AIRPORT	SOUTH DAKOTA	44.484903	-103.396241

Search Cancel

**Figure 41 - US Feature Place name Search Results**

Clicking the desired feature from the results list closes the dialog and shows the feature location on the map (Figure 42).

Search Criteria | Data Sets | Additional Criteria | Results

**1. Enter Search Criteria**  
To narrow your search area, type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

**Address/Place**  
Address/Place:  Path/Flow:   
Show Clear US/World Features

**Area Selected**  
Degree/Minute/Second ☒ Decimal ☐  
1. Lat: 44° 44' 00" N, Lon: 103° 51' 30" W ☒ ☐  
Add Coordinate Clear Coordinates

**Date Selected**  
Search from: 01/01/1990 to: 12/31/2020  
Search months: (all)  
Number of records to return: 100

Data Sets Additional Columns Results

**Search Criteria Summary (Show)** Clear Criteria

(coordinates) Decimal Grid DMS Grid Map Satellite

Google

Map data ©2011 Terra USA, Imagery ©2011 Google, Labels ©2011 Google

**Figure 42 - US Feature Place name Selected**

- e. Path/Row – Selecting the Path/Row option allows entry of WRS1 or WRS2 path row criteria for the search.

Selecting the Path/Row button displays the Path/Row WRS criteria dialog box (Figure 43). Select either WRS1 or WRS2 and then enter the Path and Row for the desired area. For example, selecting ‘WRS2’ and entering Path: 31 and Row: 29 will identify the center point for WRS2, Path 31, and Row 29. Selecting ‘Show’ identifies the path/row location on the map (Figure 44).

**Search Criteria** | Data Sets | Additional Criteria | Results

**1. Enter Search Criteria**  
To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

**Address/Place**

Address/Place | **Path/Row**

Type: WRS2 Path: 31 Row: 29

Show Clear

**Area Selected**

Degree/Minute/Second | **Decimal**

No coordinates selected.

Add Coordinate Clear Coordinates

**Dates Selected**

Search from: 01/01/1920 to: 12/31/2020

Search months: (all)

Number of records to return: 100

Data Sets > Additional Criteria > Results >

Figure 43 - Path/Row



**Figure 44 - Path/Row Location**

### 3. Enter Search manually using the Area Selected

The Area Selected coordinates are added or updated by either entering location information using the Google Map interface or the Address/Place interface. Another way to define an area of interest is to manually type in latitude/longitude coordinates within the 'Area Selected'.

To enter latitude/longitude coordinates manually, select the 'Degree/Minute/Second' or 'Decimal' option, to display how the latitude/longitude information will be entered. Then click 'Add Coordinate' (Figure 45).

**Figure 45 - Add Coordinate**

Clicking 'Add Coordinate' will display the 'Add new Coordinate' dialog box. As shown in Figure 46, the dialog box is used to enter degrees, minutes, and seconds of a point. When you Click Add, the dialog goes away, the point is shown on the map and the coordinate is added to Area Selected. Multiple points can be entered using this same method (Figure 47).

Add New Coordinate

Latitude:

North

Longitude:

West

Add

Cancel

Figure 46 - Add New Coordinate

Search Criteria

Data Sets

Additional Criteria

Results

1. Enter Search Criteria

To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

Address/Place

Address/Place

Path/Row

Type: 

Wider

 Path: 

51

 Row: 

29

Show

Clear

Area Selector

Degree/Minute/Second

Decimal

1. Lat: 43° 57' 00" N, Lon: 006° 37' 00" W

Add Coordinate

Clear Coordinates

Dates Selected

Search from: 01/01/1920 to: 12/31/2020

Search months: (all)

Number of records to return: 100

Data Sets >

Additional Criteria >

Results >

Search Criteria Summary (Show)

(coordinates)

Universal Grid

UIMS Grid

Map

Satellite

Clear Selection

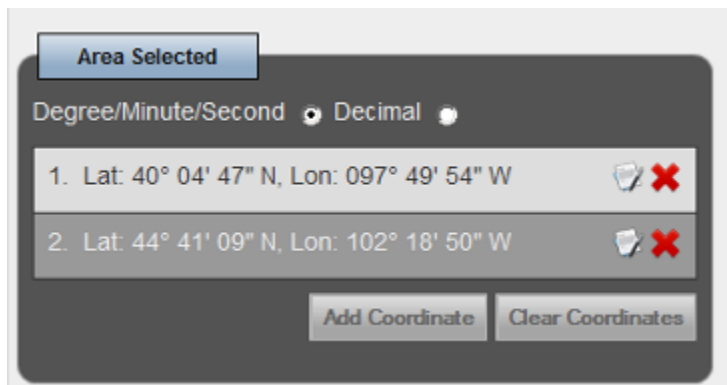
Add Map to Selection

Clear Selection Tool

Figure 47 - Add New Coordinate Location

Page: 33

Select:  to delete a coordinate or click:  to edit a coordinate (Figure 48).



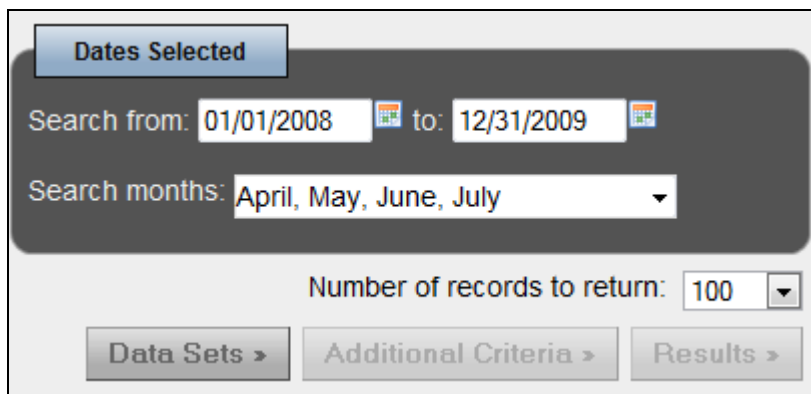
The 'Area Selected' dialog box has a title bar 'Area Selected'. Below it are two radio buttons: 'Degree/Minute/Second' (selected) and 'Decimal'. There are two rows of coordinate input fields. The first row contains '1. Lat: 40° 04' 47" N, Lon: 097° 49' 54" W' and the second row contains '2. Lat: 44° 41' 09" N, Lon: 102° 18' 50" W'. Each row has a small icon of a document with a red 'X' to its right, indicating a delete action. At the bottom are two buttons: 'Add Coordinate' and 'Clear Coordinates'.

**Figure 48 - Delete or Edit Coordinates**

#### **4. Dates Selected**

The 'Dates Selected' option provides a method for entering a beginning and ending date range to refine your search criteria (Figure 49). You are not required to modify the default date range but it is highly recommended to help reduce the number of search results returned from a search. 'Search Months' allows you to specify which months to search within the date range you specify.

For example, Figure 49 shows a search range of '01/01/2008' to '12/31/2009', with selected months of April, May, June, and July.



The 'Dates Selected' dialog box has a title bar 'Dates Selected'. It contains two date input fields: 'Search from: 01/01/2008' and 'to: 12/31/2009', each with a calendar icon. Below these is a 'Search months:' label followed by a dropdown menu showing 'April, May, June, July'. At the bottom right is a 'Number of records to return:' label with a dropdown menu set to '100'. At the bottom are three buttons: 'Data Sets >', 'Additional Criteria >', and 'Results >'.

**Figure 49 - Dates Selected**

#### **5. Number of records to return**

The EarthExplorer interface allows you to select the number of records to return from a search. Use the 'Number of records to return' dropdown to select the max number of scenes returned (Figure 50).

**Search Criteria**   Data Sets   Additional Criteria   Results

### 1. Enter Search Criteria

To narrow your search area: type in an address or place name, enter coordinates or click the map to define your search area, and/or choose a date range.

**Address/Place**

**Address/Place**   **Path/Row**

Type:  Path:  Row:

**Area Selected**

Degree/Minute/Second ☒ Decimal ☐

No coordinates selected.

**Dates Selected**

Search from:   to:

Search months:

**Number of records to return:**

**Figure 50 - Number of records to return**

Once you have entered your Search Criteria, click the 'Data Sets' tab at the top or bottom of the 'Enter Search Criteria' form.





## B. Select Data Set(s):

The '**Data Sets**' tab allows you to select which dataset(s) you wish to search (Figure 51).



Figure 51 - EarthExplorer Search Tabs – Data Sets

The '**Data Set**' menu (Figure 52) categorizes datasets into similar data collections. EarthExplorer uses a dynamic tree menu with expandable/collapsible links for each major data category. Click the 'plus sign'  next to the category name to expand the list of datasets for that collection. Click the 'minus sign'  next to the category name to collapse the list.

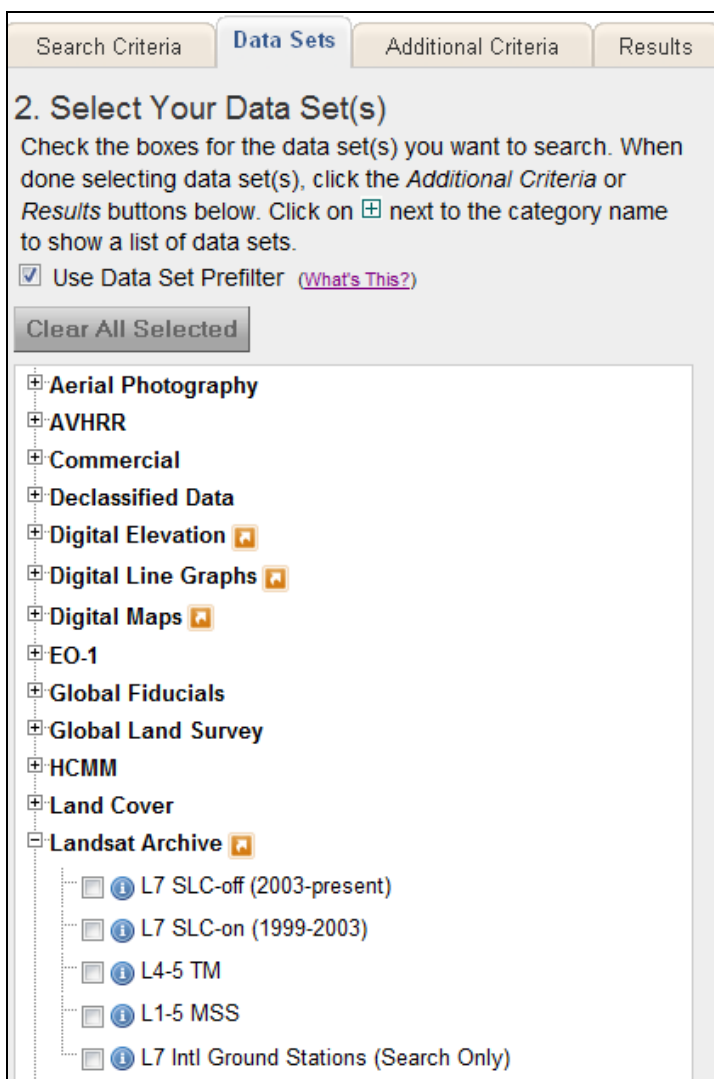


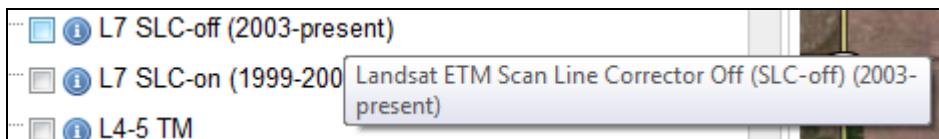


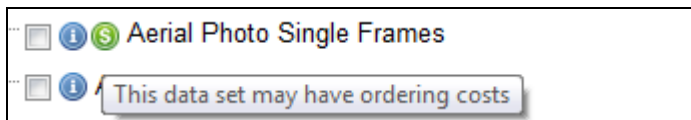
Figure 52 - Data Set Selection Expandable View

Information about a collection is identified with the 'Related Links' icon.  Information about each dataset is identified with information icon.  Moving the mouse pointer over a dataset displays a longer description of the dataset (Figure 53).



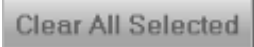
**Figure 53 - Dataset mouse over example**

The majority of the datasets are available for download from the USGS at no cost. A few datasets have a minimal fee to cover the cost of increasing the priority in production. These datasets are identified with a 'dollar sign' icon (Figure 54). 💰



**Figure 54 - Dataset with cost of reproduction icon**

**Data Set Prefilter** – Selecting the Data Set Prefilter option is used to filter out any data sets that do not match a user's search criteria. Applying the prefilter narrows the list of datasets to include only those based on the area of interest, date range, and months selected on the Search Criteria tab. The prefilter does not guarantee results for the defined search criteria.

Clicking the '**Clear All Selected**'  unselects all datasets that were selected.

After selecting a dataset, click the 'Additional Criteria' tab to enter additional criteria, or click the 'Results' tab to execute the search and view the results for the criteria entered.

### C. Enter Additional Criteria:

The '**Additional Criteria**' tab is an optional input area that allows entry of additional specific search criteria specific to the dataset(s) selected. Clicking the '**Additional Criteria**' tab displays the additional criteria for the first dataset selected (Figure 55).

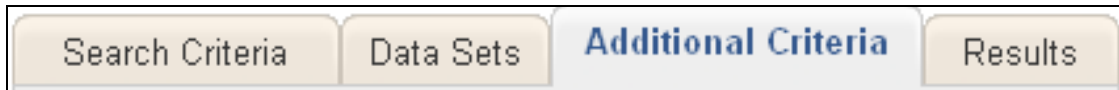
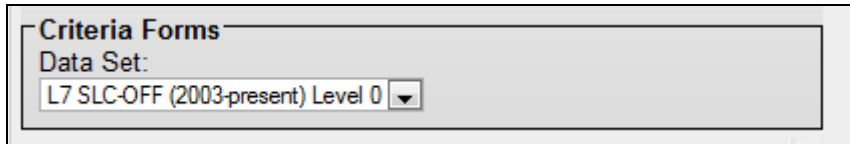


Figure 55 - EarthExplorer Additional Criteria Tab

Each dataset in EarthExplorer has additional specific criteria that can be entered to narrow the results of a search (Figure 56).

Figure 56- Example Additional Criteria form

Select the dataset from the dropdown box (if only one dataset has been selected, only one will appear in the dropdown box) (Figure 57).

The image shows a software window titled "Criteria Forms". Inside the window, there is a label "Data Set:" followed by a dropdown menu. The dropdown menu is open, showing the text "L7 SLC-OFF (2003-present) Level 0" and a small downward-pointing arrow on the right side of the text.

**Figure 57 - Data Set Criteria forms**

Each criteria page is different, based on the unique specific search criteria defined for that dataset. In the following example, the specific search criteria include:

- WRS Path.
- WRS Row.
- Cloud cover.
- Data Category.
- Day Night.
- Landsat Scene Identifier.

Clicking the title of a search criteria attribute provides information about that particular search item.

Search Criteria
Data Sets
**Additional Criteria**
Results

### 3. Additional Criteria (Optional)


If you have more than one data set selected, use the dropdown to select the additional criteria for each data set.

**Criteria Forms**  
Data Set:  
L7 SLC-OFF (2003-present) Level 0

**L7 SLC-OFF (2003-present) Level 0**  
All Landsat 7 ETM+ scenes acquired after July 14, 2003 were collected in SLC-off mode.  
  
Landsat 7 ETM+ scenes acquired from 5/31/03 - 7/14/03 and 9/3/03 - 9/17/03 are not available.  
  
**WRS Path**  
to  
  
**WRS Row**  
to  
  
**Cloud Cover**  
All  
Less than 20%  
Less than 10%  
Less than 30%  
Less than 40%  
**Data Category**  
All  
Normal Data  
Partial Aperture Calibration Data  
  
**Day Night**  
All  
Day  
Both  
Night  
  
**Landsat Scene Identifier**  
  
  
  
Reset All Criteria
Results >

Figure 58 - Unique Criteria Form

Enter the additional criteria as desired to narrow your search (Figure 58).

Clicking the 'Reset'  clears the page of the current dataset listed. The 'Reset All' button clears the criteria forms for all the datasets listed. Once the additional criteria (if any) have been entered, click the 'Results' tab or button to execute a search.



## D. View Search Results

The **'Results'** tab (Figure 59) executes a search using your search criteria and displays the results for the search criteria entered. The results panel displays the thumbnail and textual information for each scene returned from the search on the left side of the panel. The right side of the page displays the Google Map interface with an outline of the area of interest you identified (Figure 60).

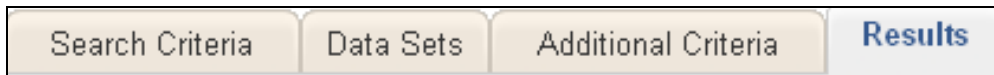


Figure 59 – EarthExplorer Results Tab

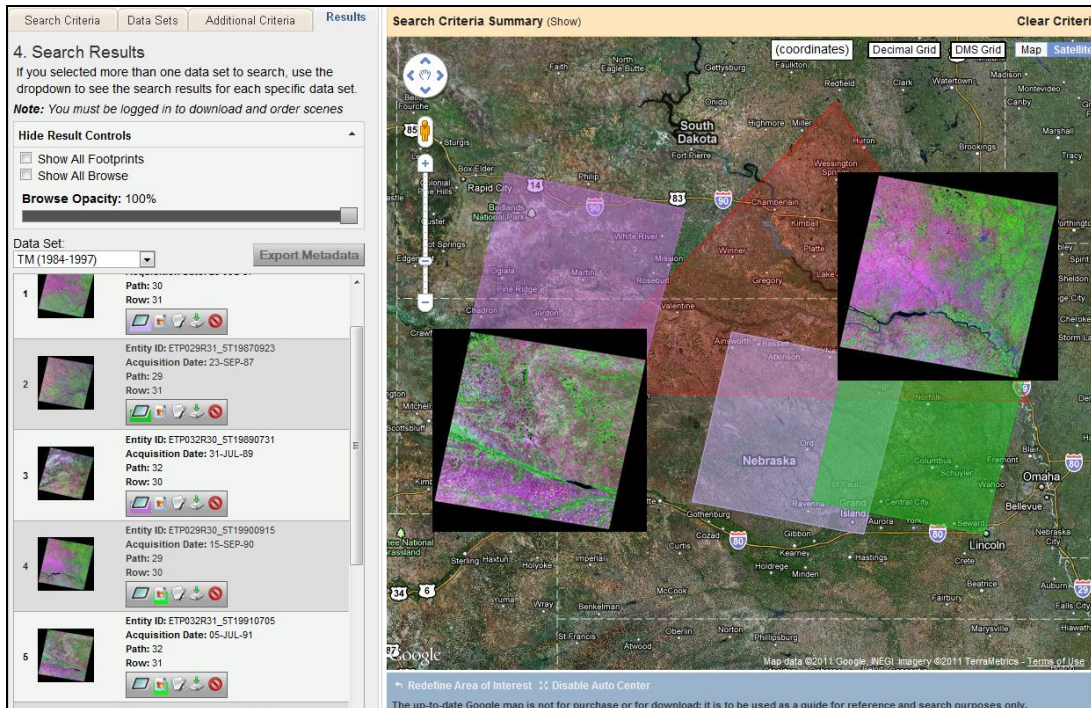


Figure 60 - Example Results

The Search Results panel includes the following components:

- **Show Result Controls** – Provides the option to show all footprints, browse, to add all page results to the shopping basket, and to modify the opacity of browse displayed on the map
- **Search Results list** – Displays the thumbnail, textual information, icons to view details of each scene, view browse, request downloads of data and other visualization controls for each record returned from the search
- **Google Map Interface** – Allows you to visually see the search area, view footprints on the map, and review a browse image for each scene through the Google Map interface

### 1. Search Result Controls

The Search Results Controls (Figure 61) provides options for:

- Displaying all footprints on the map display from the search results list
- Display all browse on the map display from the search results list
- Add all search results displayed on this page to the item basket

#### 4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

**Note:** *You must be logged in to download and order scenes*

Hide Result Controls ▲

☐ Show All Footprints

☐ Show All Browse

☐ Add All Results from Page to Order

Browse Opacity: 100%

Data Set:  
L7 SLC-off (2003-present) ▼

Export Metadata

Figure 61 - Search Result Control



Selecting **'Show All Footprints'** (Figure 62) displays footprints from the current page of results.

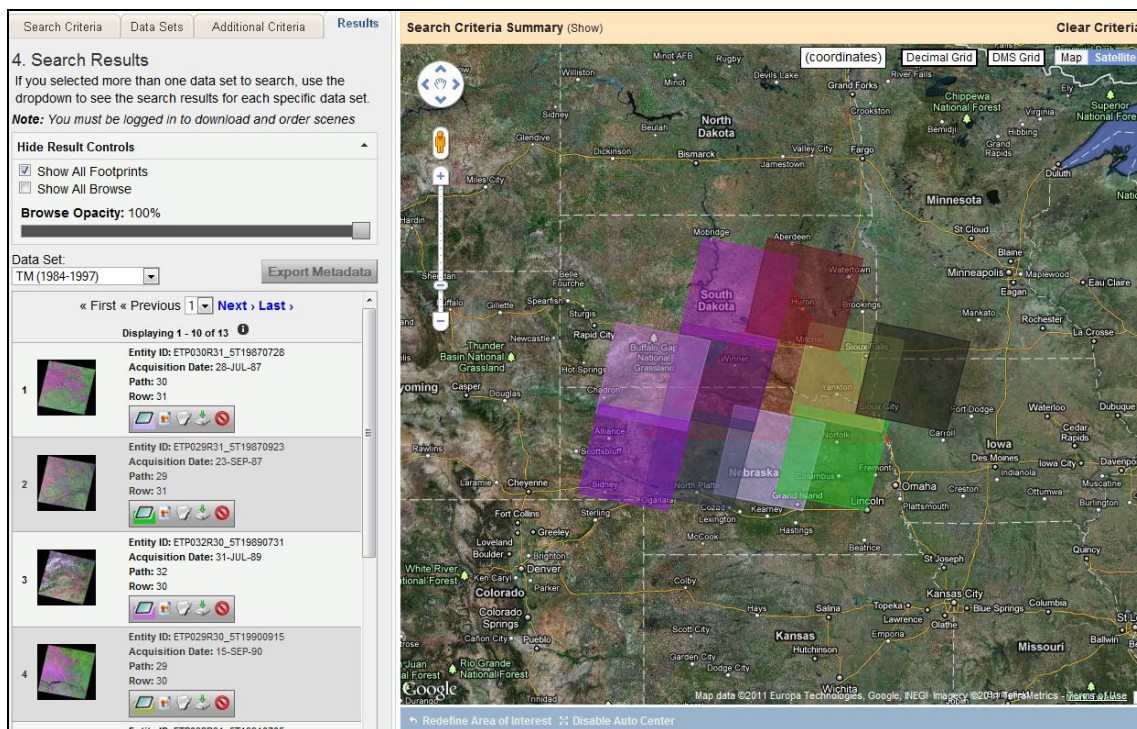


Figure 62 - Show All Footprints

Selecting **'Show All Browse'** (Figure 63) displays all browse from the current page of results.

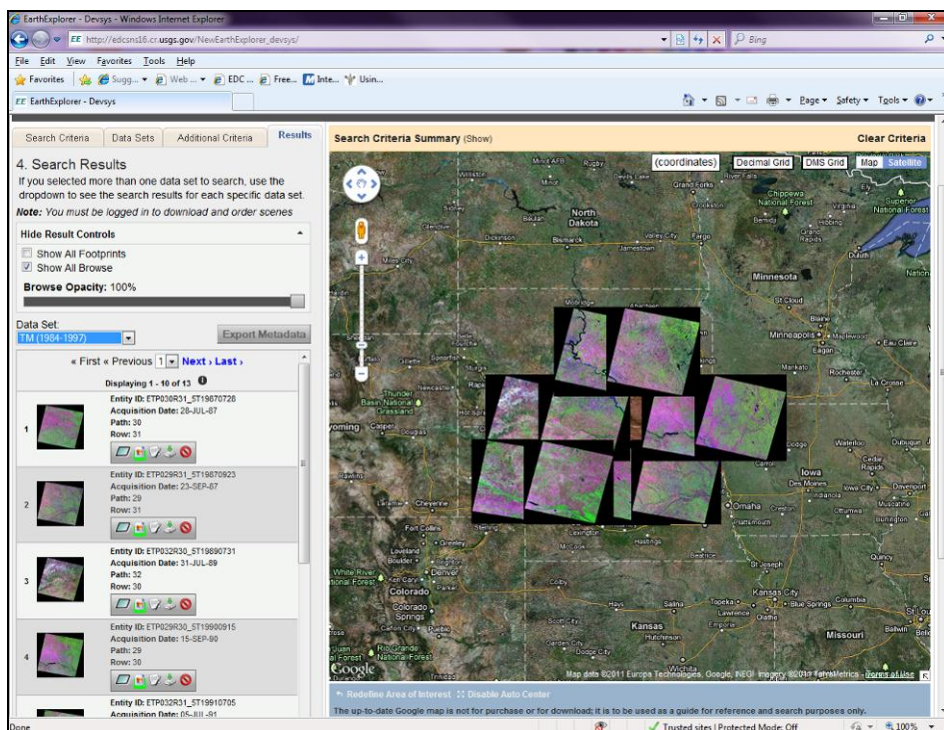


Figure 63 - Show All Browse

Selecting '**Add All Results from Page to Order**' adds all the results displayed on current page to the item selection basket.

The '**Browse Opacity**' slider (Figure 64) is used to adjust the opacity level of the overlay browse images.

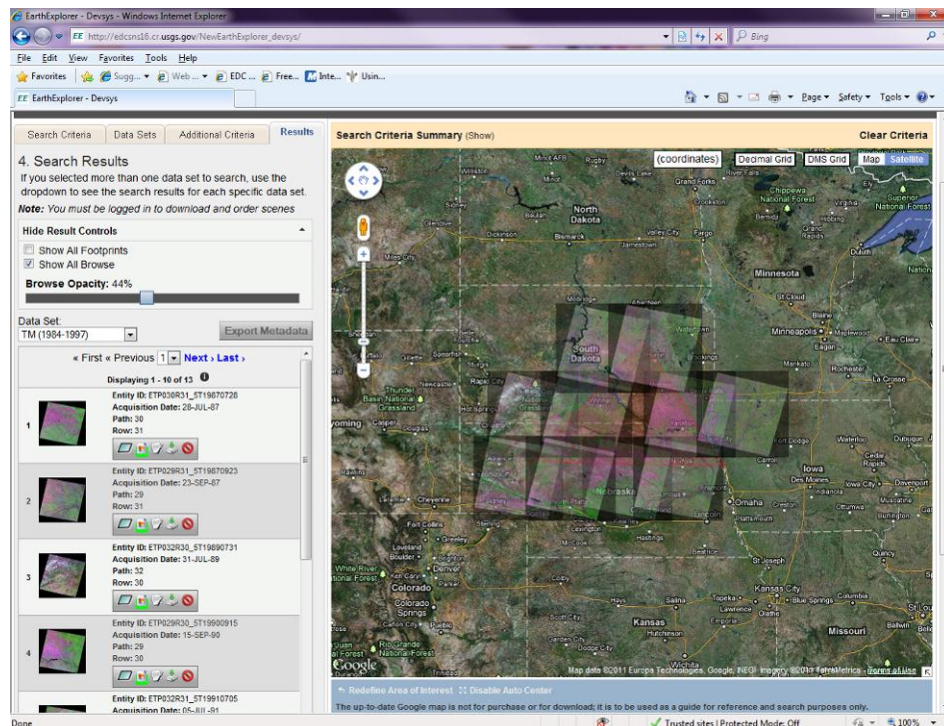


Figure 64 - Browse Opacity Example

## 2. Search Results List

The Search Results list area provides the controls for displaying the search results. Each search result includes a thumbnail image, textual information on each scene, links to view browse, and download, and other visualization controls.

### a. Multiple Datasets

EarthExplorer allows you to search multiple datasets (Figure 65). When multiple datasets are searched, the results of the first dataset are shown in the results panel. The "Data Set" selection box is used to select and view each additional dataset.

Search Criteria

Data Sets

Additional Criteria

Results

### 4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

**Note:** You must be logged in to download and order scenes

Show Result Controls

Data Set:

TM (1984-1997)

L7 SLC-on (1999-2003)

TM (1984-1997)

Previous 1

Next > Last >

Export Metadata

Figure 65 - Select Data Set Results

An example of search results is shown in Figure 66.

Search Criteria

Data Sets

Additional Criteria

Results

### 4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Show Result Controls

Data Set:

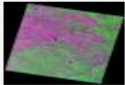





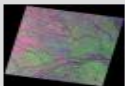





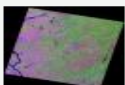





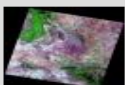





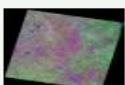





TM (1984-1997)

Export Metadata

« First « Previous 1

Next > Last >

Displaying 1 - 10 of 29

1	 <div> <div>Entity ID: ETP030R31_ST19870728</div> <div>Acquisition Date: 28-JUL-87</div> <div>Path: 30</div> <div>Row: 31</div> <div>      </div> </div>
2	 <div> <div>Entity ID: ETP029R31_ST19870923</div> <div>Acquisition Date: 23-SEP-87</div> <div>Path: 29</div> <div>Row: 31</div> <div>      </div> </div>
3	 <div> <div>Entity ID: ETP031R28_4T19890630</div> <div>Acquisition Date: 30-JUN-89</div> <div>Path: 31</div> <div>Row: 28</div> <div>      </div> </div>
4	 <div> <div>Entity ID: ETP035R30_ST19890704</div> <div>Acquisition Date: 04-JUL-89</div> <div>Path: 35</div> <div>Row: 30</div> <div>      </div> </div>
5	 <div> <div>Entity ID: ETP026R30_ST19890705</div> <div>Acquisition Date: 05-JUL-89</div> <div>Path: 26</div> <div>Row: 30</div> <div>      </div> </div>

Submit Standing Request >

Figure 66 - Example Search Results



## b. Overlay and Download Controls

Each search results record includes a thumbnail image, textual information on each scene, links to view browse and download data, and other visualization controls. Based on the dataset and user profile, some controls may not be available (Figure 67).

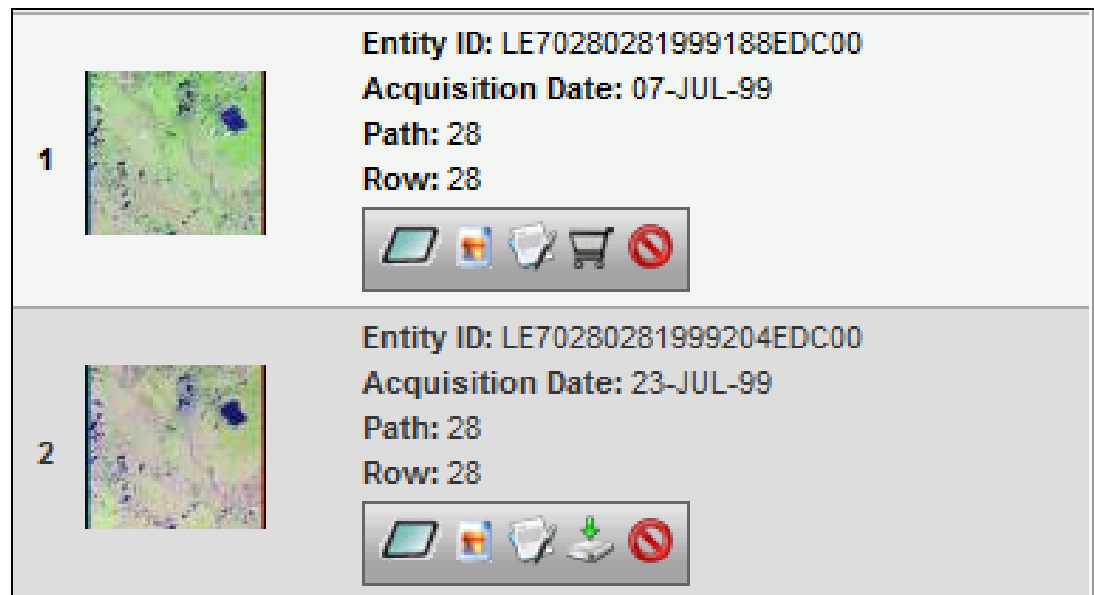



Figure 67 - Example Scene Level Results

The following is an overview of the overlay and download controls:

- Show Footprint – Selecting the ‘Show Footprint’  icon will display the footprint of the selected scenes on the Google Map (Figure 68). When the footprint option is on, the footprint icon is highlighted. Clicking the highlighted icon turns the footprint option off. Multiple footprints can be selected and displayed on the map. Each is displayed in a different color.

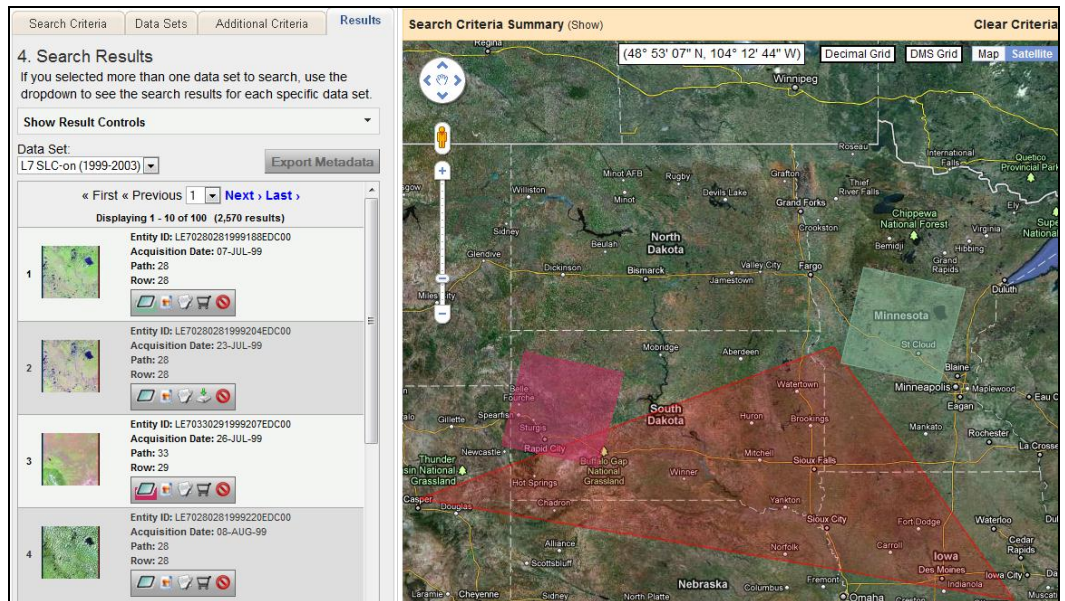



Figure 68 - Footprint Overlay

- Show Browse Overlay – Clicking the 'Show Browse Overlay'  icon will display a preview image (browse) of the scene on the map (Figure 69). When the browse option is on, the browse icon is highlighted. Clicking the highlighted icon turns the browse option off. Multiple browse can be selected and displayed on the map.

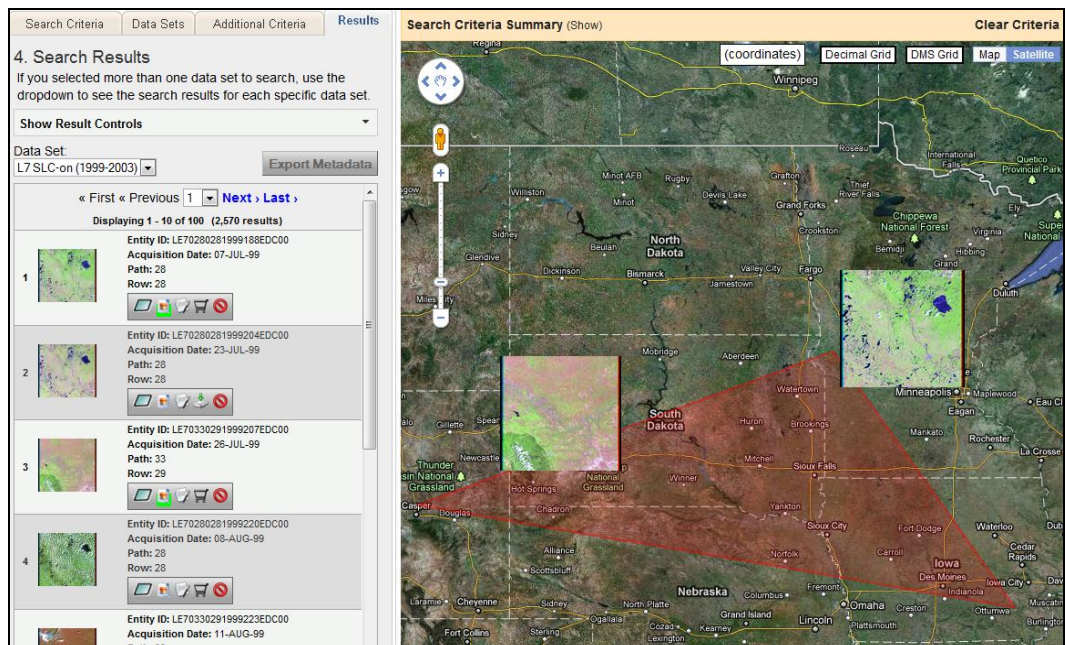


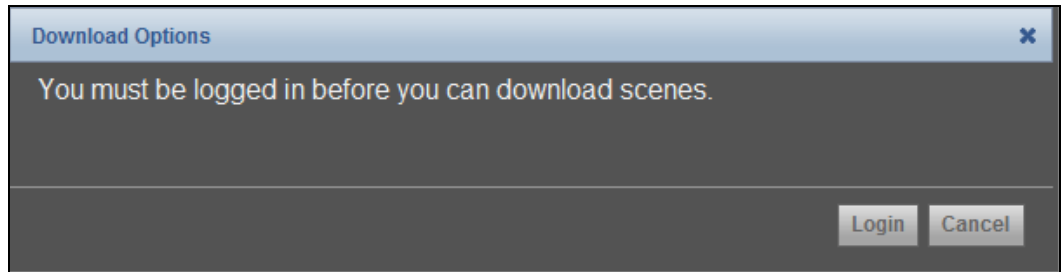


Figure 69 - Browse Overlay

- Show Metadata and Browse - Clicking the thumbnail image or  icon displays the reduced resolution browse image and full metadata for the selected scene (Section IV, d).

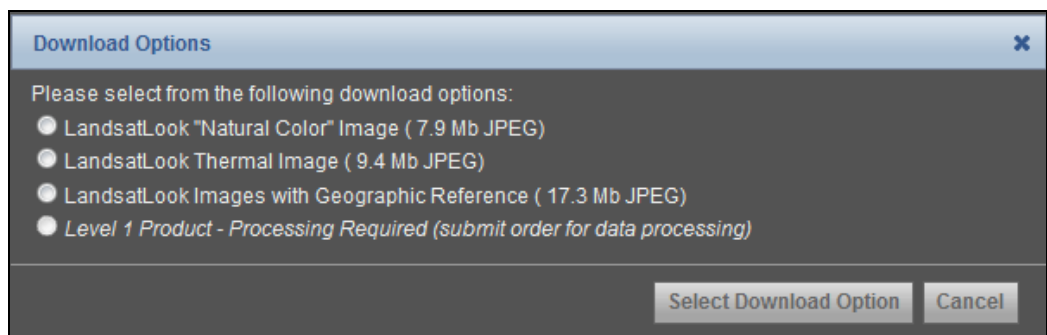
- Download Options – The ‘Download Options’ icon  allows registered users to download the selected data (Figure 70). Selecting the ‘Download Options’ icon before registering or logging in will cause you to be prompted with the following message:



**Figure 70 - Login before downloading**

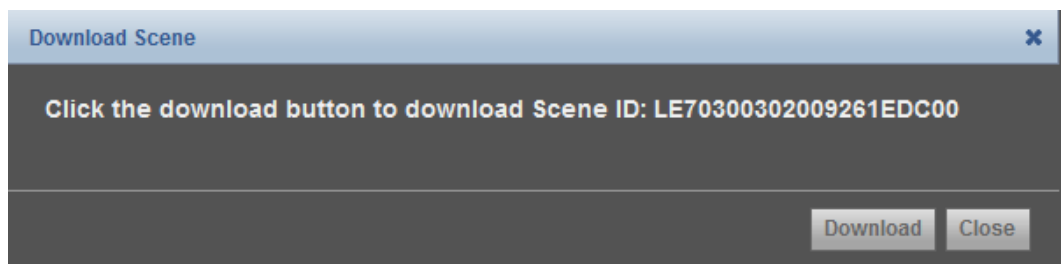
Click the ‘Login’ to log into EarthExplorer.

After logging in and clicking the ‘Download Options’ icon, a page similar to the following will be displayed (Figure 71):



**Figure 71 - Download Options Dialog**

Depending on the data set, multiple products may be available for download. After selecting the desired product, and clicking “Select Download Option”, the following dialog will be displayed (Figure 72):



**Figure 72 - Download Scene**

Clicking ‘**Download**’ will start the download process. A ‘File Download’ dialog box will be displayed (Figure 73). Select Open, Save, or Cancel the request. Selecting ‘Save’ will prompt you for the location to save the file.

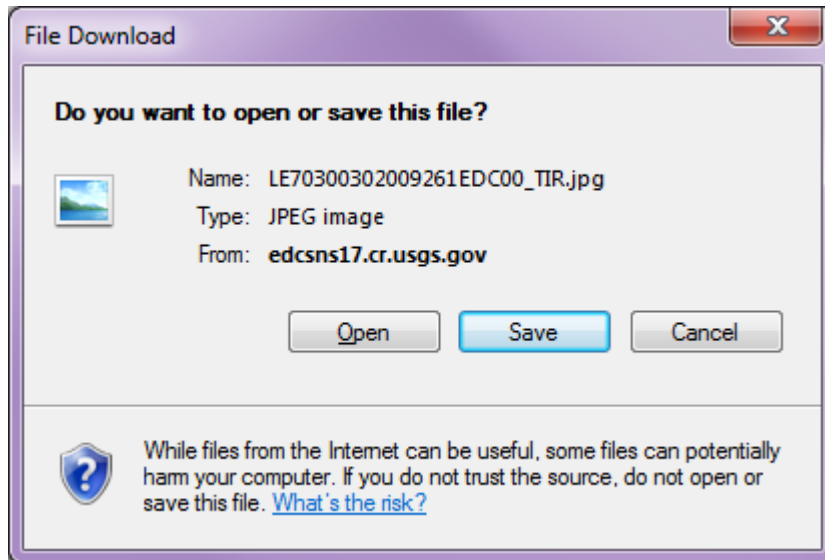



Figure 73 - Download Scene Dialog

### c. Order Controls

The majority of the products available through EarthExplorer are available via download for registered users. In some cases, order requests are available for selected products. Ordering products usually requires some specialized image or data processing. If a dataset has an option for ordering, the ‘**Order Scene**’

icon  will be shown. This option allows registered users to order or request specialized processing on certain products. The ‘**Order Scene**’ icon will be greyed out, unless you are registered and logged in. In addition, a few products require a small fee for cost of processing.

Clicking the ‘**Order Scene**’ icon adds the selected scene to the ‘Item Basket’. As each scene is added to the ‘**Item Selection**’ basket on the menu bar, the number of scenes added to the basket is updated and the ‘**Order Scene**’ icon changes to green (Figure 74).

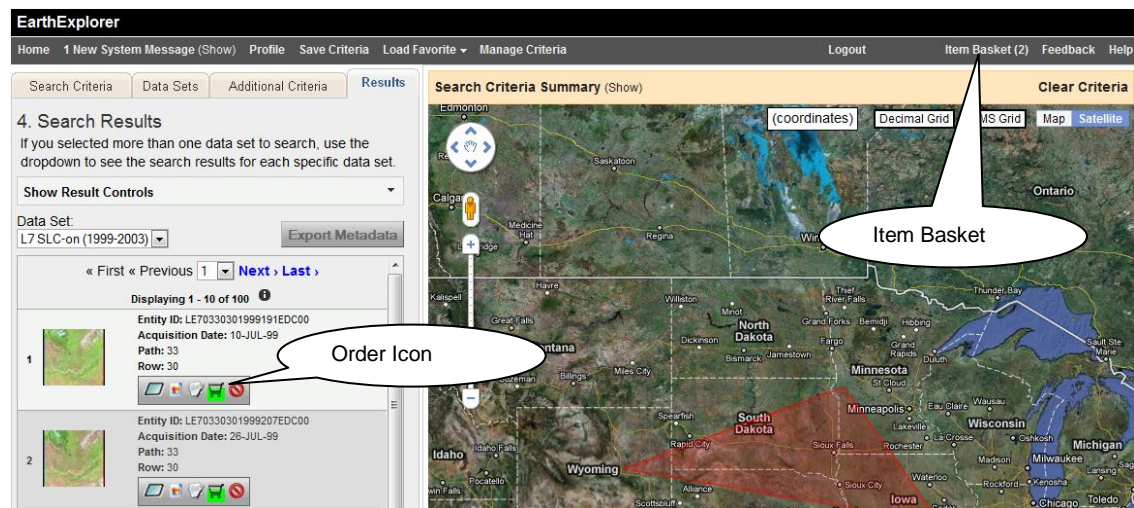

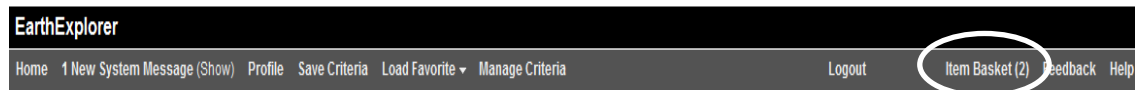


Figure 74 - Order Scene



In some cases, additional ordering parameters may be required to complete an order.

To view items in the Item Basket, click “Item Basket” in the menu bar or the “View Item Basket” button  at the bottom of the results page (Figure 75).

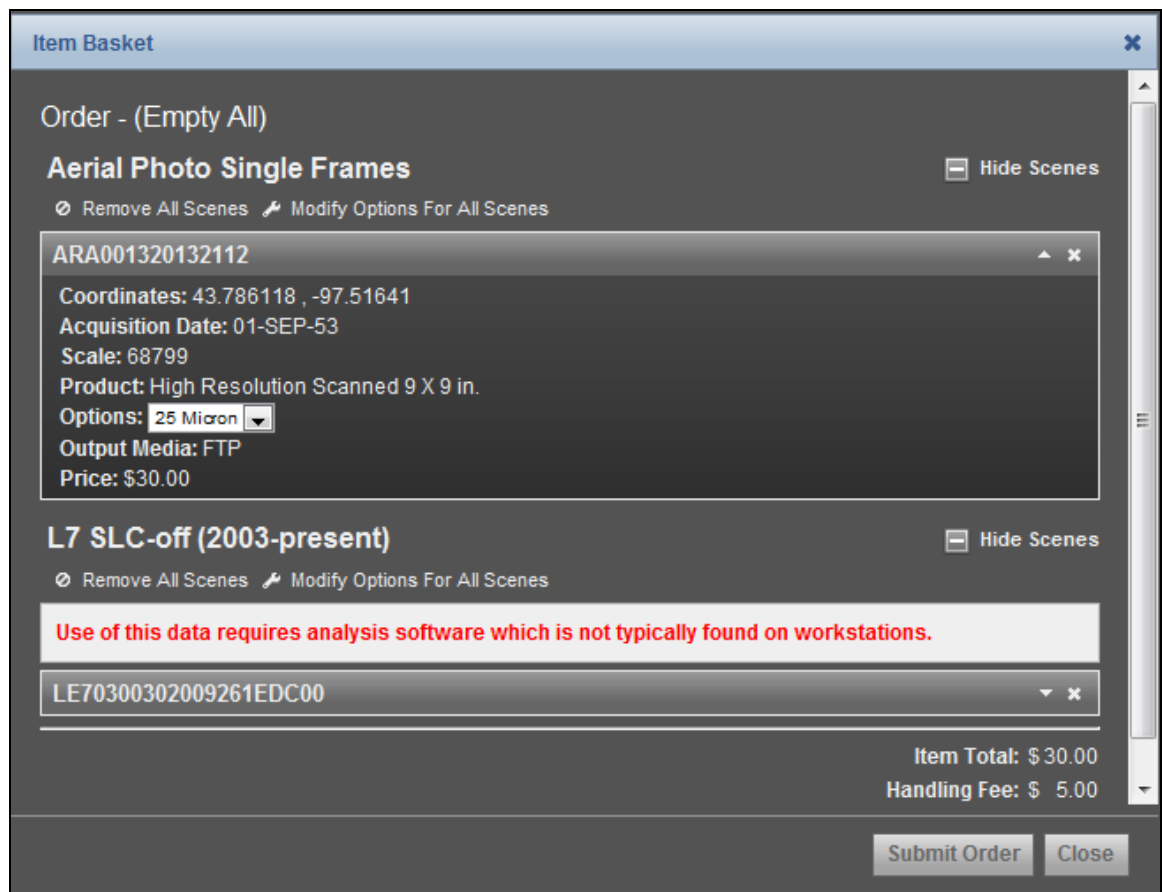


**Figure 75 - Item Basket Example**

In the following example, the first item is a request for Aerial Photo Single Frame scanning request. There is one option for the micron size for the processing parameters. The cost of scanning is \$30.

The second item is a request for a Landsat 7 ETM+ L1T/L1G SLC OFF On-Demand product. There are no processing parameters to select for this product and there is no cost for this item.

The overall cost is \$30 for the scanned product and \$5 for the handling fee (Figure 76).



**Figure 76 - Item Basket**



Clicking 'Submit Order' submits the order for processing. A confirmation email will be sent to your email address. The Checkout Summary page is displayed which you can print or save for your records (Figure 77).

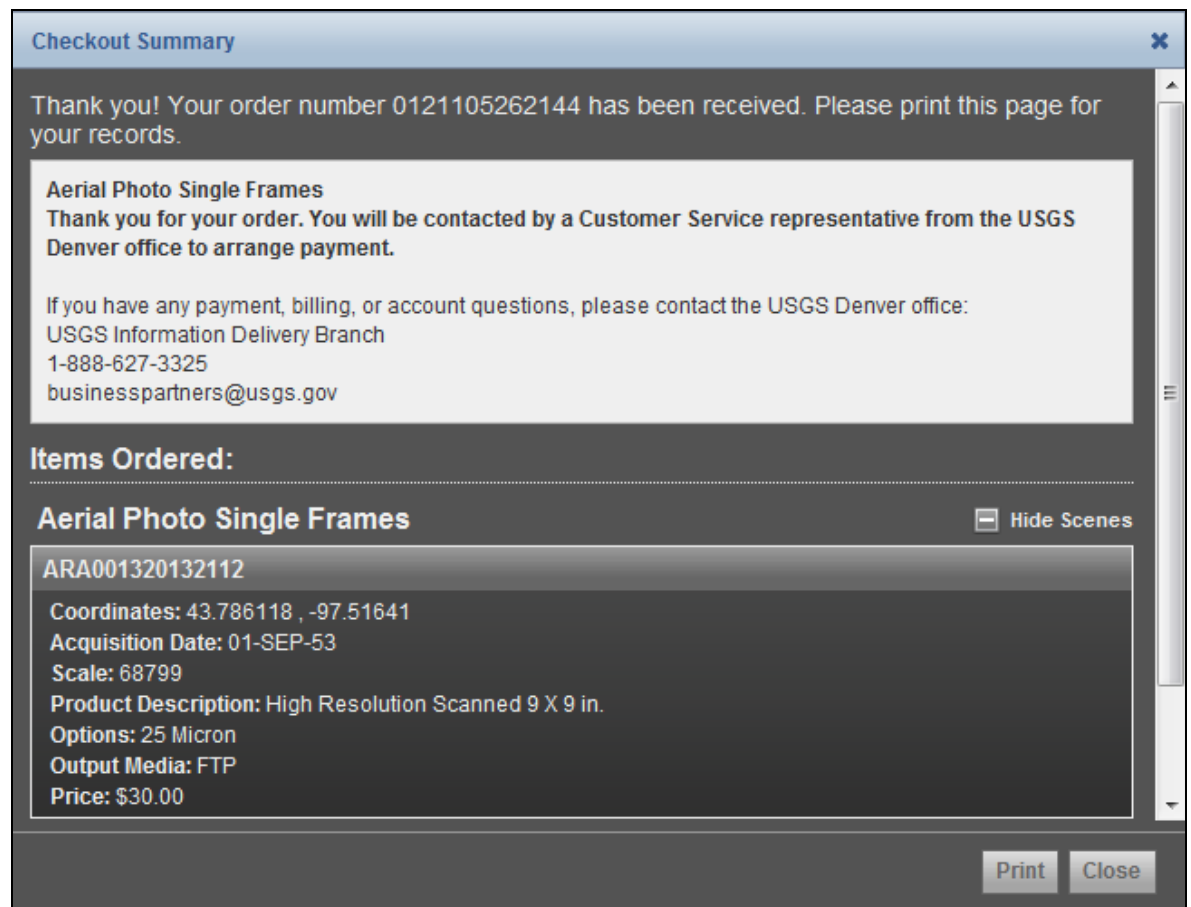

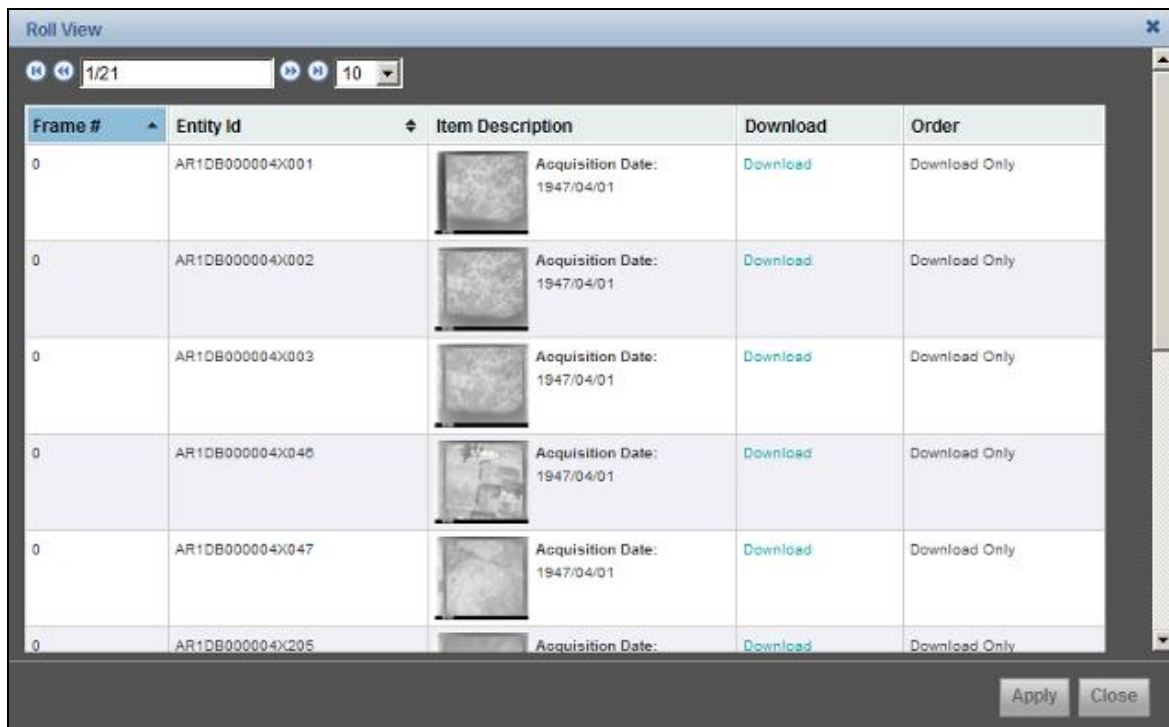








Figure 77 - Checkout Summary

Ordering Aerial Photography provides a method for downloading scenes from an entire roll. Selecting the roll icon  displays the 'Roll View' for the selected scene's roll (Figure 78).



Roll View

1/21 10

Frame #	Entity Id	Item Description	Download	Order
0	AR1DB000004X001	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only
0	AR1DB000004X002	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only
0	AR1DB000004X003	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only
0	AR1DB000004X046	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only
0	AR1DB000004X047	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only
0	AR1DB000004X205	 Acquisition Date: 1947/04/01	<a href="#">Download</a>	Download Only

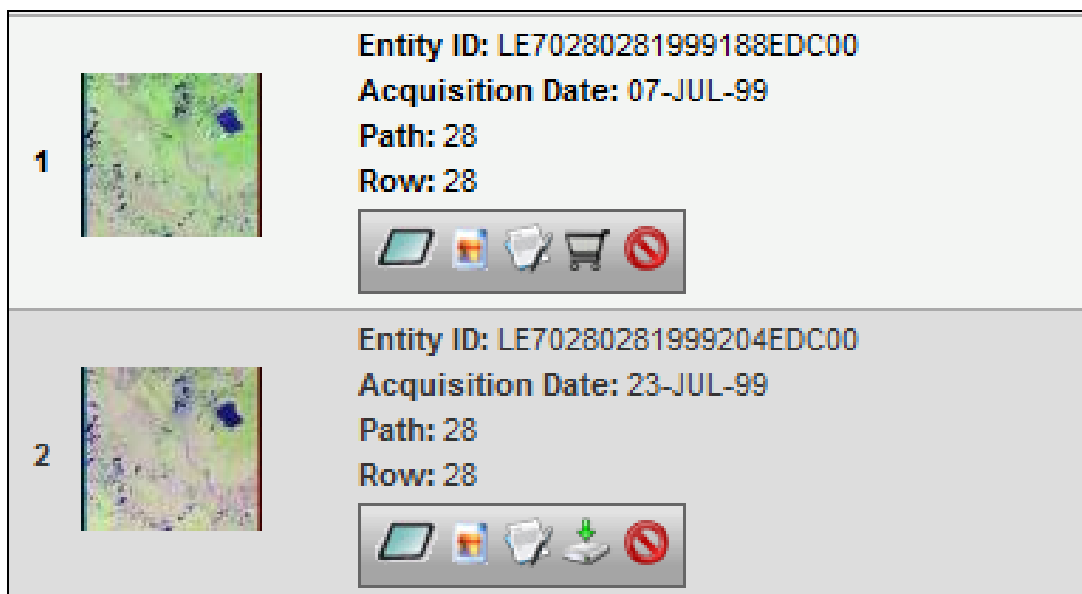
Apply Close

Figure 78 - Roll View

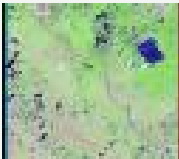
For each scene on the roll, you can download or order images.

#### d. Browse and Metadata


EarthExplorer provides the capability to display a thumbnail image, browse and detailed metadata information for each scene returned from a search (Figure 79).



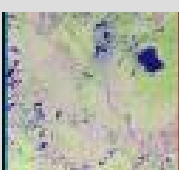
**1**



**Entity ID:** LE70280281999188EDC00  
**Acquisition Date:** 07-JUL-99  
**Path:** 28  
**Row:** 28



**2**



**Entity ID:** LE70280281999204EDC00  
**Acquisition Date:** 23-JUL-99  
**Path:** 28  
**Row:** 28




Figure 79 - Example Scene Level Results

Show Browse and Metadata – Using the mouse over on the thumbnail displays the ‘Show Browse and Metadata’ mouse over (Figure 80).

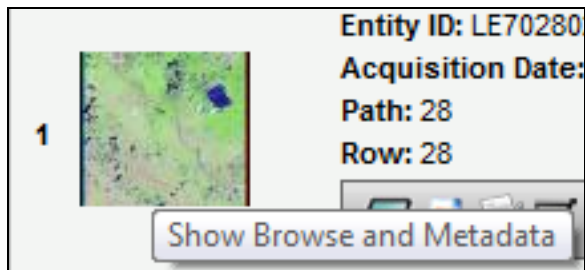



Figure 80 - Show Browse and Metadata

Clicking the thumbnail image or  icon displays the reduced resolution browse image and full metadata for the selected scene (Figure 81).

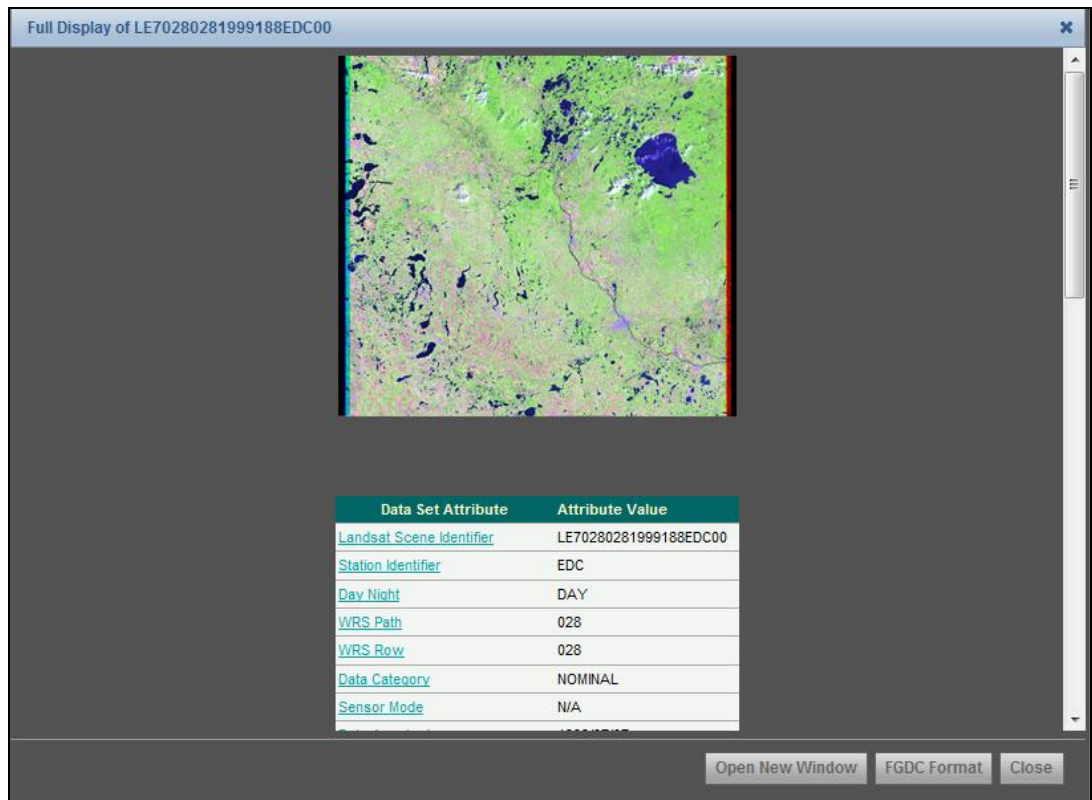
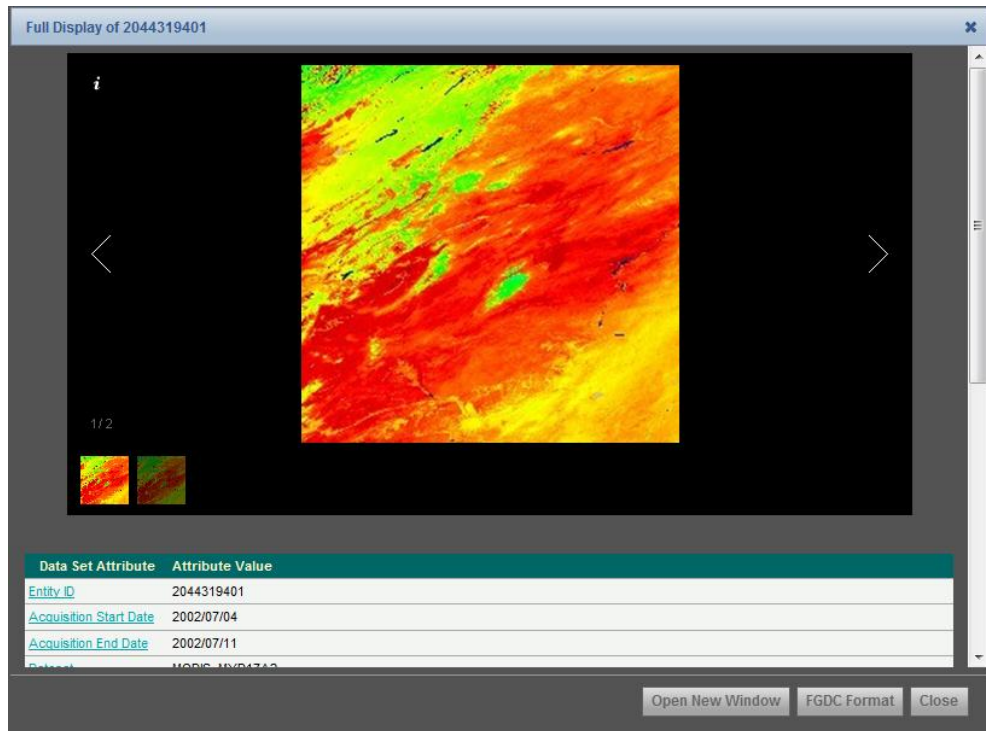


Figure 81 - Browse and Metadata View

The Browse and Metadata view includes the following:

- The Browse image of the selected scene is displayed at the top center of the lightbox display. If multiple browse area available for the image, an image control for multiple browse will be displayed.

The following graphic is an example of multiple browse for an image. Each available image is displayed as a thumbnail in the lower left corner of the display. To switch between browse, click the arrow (<>), or on one of the thumbnails at the lower left corner for the page (Figure 82).



**Figure 82 – Multiple Browse Display Example**

- Data Set Attributes – Each data set has unique attributes describing the metadata associated with the scene. Each attribute has a hyperlink to the detailed information on that particular dataset.
- Attribute Value – The attribute value is the information associated with each attribute.
- Open New Window – Clicking 'Open New Window' displays the selected browse and in a separate window (Figure 83).

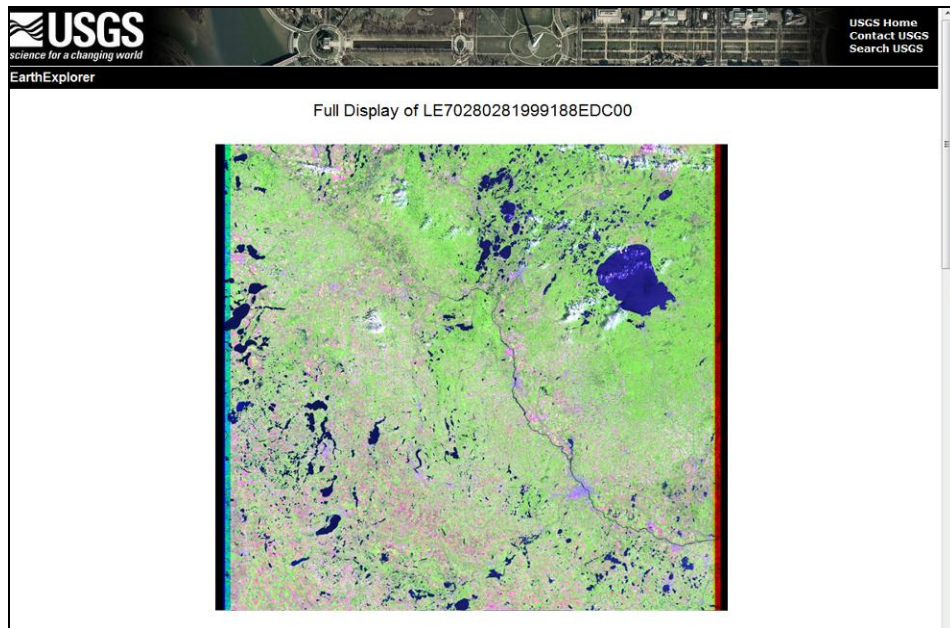


Figure 83 – Open New Window – Display Browse

- FGDC Format – Clicking ‘FGDC Format’ button displays the metadata in the Federal Geographic Data Committee format. Clicking ‘Table Format’ on the FGDC view brings back the ‘Browse and Metadata’ view (Figure 84).

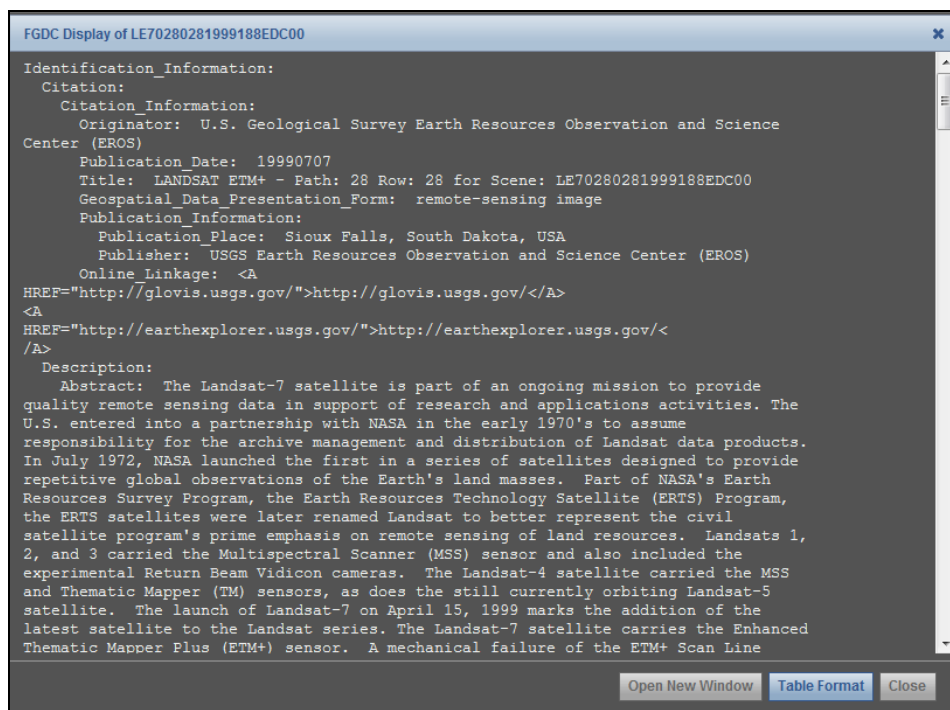


Figure 84 - FGDC Format

#### e. Search Results Controls

EarthExplorer User interface controls on the Search Results include:



- Scroll bar – Click to view additional items returned from the search.
- Displaying X – XX of XX - Results Per Page - The default 'Results Per Page' is 10 records. To show more results on the page change the 'Results Per Page' in your 'User Profile' to a higher number. The 'User Profile' requires you be a registered user. Additional information on User Profile is covered in more detail in the Section III Registration and Profile.
- Information icon - **Displaying 1 - 10 of 100** ⓘ - Click to see the number of records in the dataset. **Error! Reference source not found.** provides an example. In this case, 100 records were returned from the search (the default setting) but the number of items in the dataset is 2,570 (Figure 86).

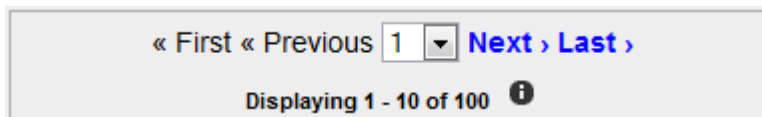


Figure 85 - Default Search Results Returned = 100

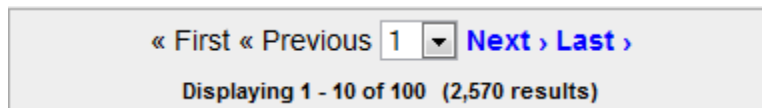


Figure 86 - Total Search Results of query = 2570

To modify the number of search results, refer to the '**Search Criteria**' tab and modify the '**Number of records to return:**' on the 'Enter Search Criteria' panel (Figure 87).

The screenshot shows the 'Search Criteria' tab with the following sections:

- 1. Enter Search Criteria**: Instructions to narrow the search area by address, coordinates, or map click.
- Address/Place**: Sub-section with 'Address/Place' and 'Path/Row' tabs. The 'Path/Row' tab is active, showing 'Type: WRS2', 'Path: 31', and 'Row: 29'. 'Show' and 'Clear' buttons are present.
- Area Selected**: Sub-section with radio buttons for 'Degree/Minute/Second' and 'Decimal'. A message states 'No coordinates selected.' with 'Add Coordinate' and 'Clear Coordinates' buttons.
- Dates Selected**: Sub-section with 'Search from' (01/01/1920) and 'to' (12/31/2020) date pickers, and a 'Search months' dropdown set to '(all)'.
- Number of records to return**: A dropdown menu circled in red, currently set to '100'.
- Navigation Buttons**: 'Data Sets >', 'Additional Criteria >', and 'Results >' buttons at the bottom.

Figure 87 - Search Criteria - Number of records to return

Paging controls include the following:

- **Page Number**  - Click to select a different page of results
- **Next** – Click to go the next page
- **Previous** - Click to go back to the previous page
- **First** - Click to go to the first page
- **Last** - Click to go to the last page

f. Export Metadata

EarthExplorer provides an option to 'Export Metadata' results in a number of popular formats (Figure 88).

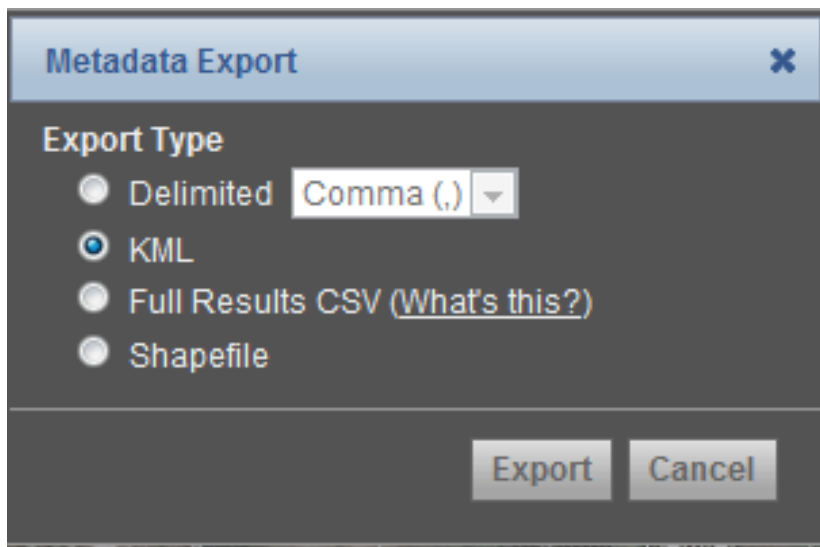
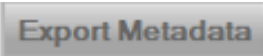




Figure 88 - Export Options


To export metadata, select the  button.  
The following formats are available:

- Delimited - generates a .txt file, with the delimiter of choice (comma or pipe) with the returned, non-excluded results from a search. The information includes the full metadata as displayed in the lightbox.
- KML - generates a .kml file with the returned, non-excluded results from a search. The information in this export includes the full metadata as displayed in the standard metadata dialog. The KML 2.2 standard is used for this KML file. This export format is not available for results sets larger than 1000 results.
- Full Results - The full results export allows a user to enter the number of records they would like to return. The export function uses this number, along with the current search criteria to generate a csv formatted export of search results. The metadata in this export includes the metadata returned on the search result screen. This export does not take into consideration excluded scenes.
- Shapefile - generates a .zip file with the returned, non-excluded results from a search. Files included in the .zip file include a .shp, .shx, .dbf, and .prj. Shapefiles are generated using the ERSI standards. Limited metadata is included with this export. This export is not available for results sets larger than 1000 results.

Clicking  excludes a scene from the metadata export. Clicking  returns the excluded scenes to the list.

### 3. Standing Request

The 'Standing Request' function provides the capability for registered users to run searches for new acquisitions, in the background, using the same search criteria. The Submit Standing Request button is only visible if you are logged in to Earth Explorer

The 'Submit Standing Request'  button is at the bottom of the search results list panel (Figure 89).

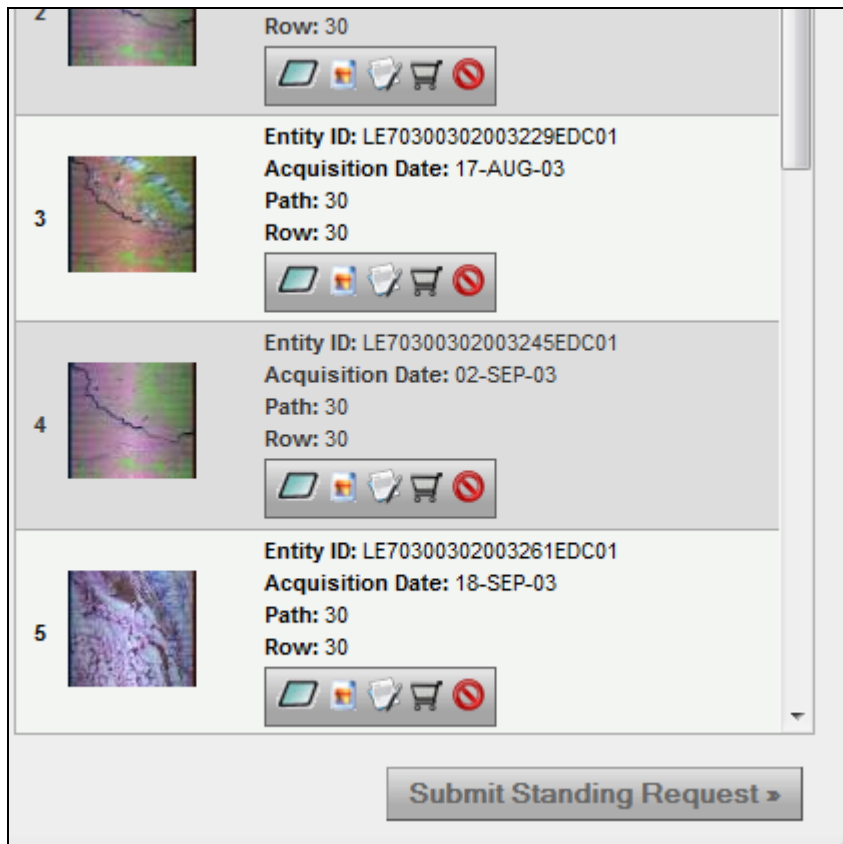


Figure 89 - Submit Standing Request

Selecting the 'Submit Standing Request' button displays the 'Save as Standing Request' form (Figure 90).

**Save as Standing Request** [X]

Name:

Frequency:

Metadata Format:

Browse Link:

Start Date:

End Date:

\*Note: ALL Search Criteria and Additional Criteria you have selected WILL be saved with your standing request.

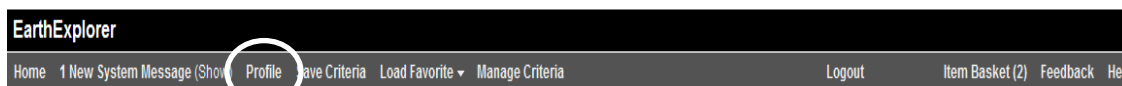
**Figure 90 - Standing Request Form**

Enter the following criteria for a standing request:

- **Name** – Enter a name for this request
- **Frequency** – Select Daily, Weekly, Monthly, or Quarterly. This determines how frequent search will run
- **Metadata Format** – Identifies the format of the metadata (Text, CSV, FGDC, and Pipe Delimited)
- **Browse Link** – Determines if a link (Yes/No) to the browse image is included in the standing request search results
- **Start Date** – Starting Date for the standing request
- **End Date** – Ending Date for the standing request

Clicking the '**Submit**' button executes the Standing Request.

To review standing requests, click '**Profile**' on the EarthExplorer Main menu bar (Figure 91).



**Figure 91 - Manage Criteria**

This will display the 'Profile Menu'. Click '**Standing Request**' on the Profile menu to see the list of standing requests entered (Figure 92).

The screenshot shows a web application interface. At the top, there are links for 'Home', 'Profile', 'Logout', and 'Feedback'. On the left, a 'Profile Menu' is displayed with a list of options: Profile Home, Password, Secret Question, Contact Address, Billing Address, Shipping Address, User Affiliation, Interface Options (Data Sets, Sort Order, Metadata View), Saved Criteria, **Standing Request**, and Order Tracking. The 'Standing Request' option is highlighted. The main content area is titled 'Standing Request' and contains a table with the following columns: Name, Status, Frequency, Last Run, Start Date, and End Date. A single row is visible in the table with the following data: Name: Landsat\_data, Status: New, Frequency: weekly, Last Run: (empty), Start Date: 2011-06-10, End Date: 2011-10-14. Above the table, there are search and pagination controls, including a search bar with '1/1' and a dropdown menu with '10'.

Name	Status	Frequency	Last Run	Start Date	End Date
Landsat_data	New	weekly		2011-06-10	2011-10-14

**Figure 92 - Standing Request**

The Standing Request module will send you email when a new acquisition matches your search criteria. You are then able to review metadata and browse for the scenes that are returned.



## Appendix

Acronym	Description
API	Application Programming Interface
DMS	Degrees, Minutes, Seconds
EE	Earth Explorer
EROS	Earth Resources Observation and Science Center
ETM+	Enhanced Thematic Mapper Plus
FGDC	Federal Geographic Data Committee
FOIA	Freedom of Information Act
GB	Gigabyte
GHZ	Gigahertz
GloVIS	USGS Global Visualization Viewer
HDDS	Hazards Data Distribution Systems
HTTPS	Hypertext Transfer Protocol Secure
KML	Keyhole Markup Language
L1G	Level 1 Systematic Correction
L1T	Level 1 Standard Terrain Correction
LDCM	Landsat Data Continuity
MB	Megabyte
OGC	Open Geospatial Consortium
PC	Personal Computer
PHP	Hypertext Preprocessor
RSS	Really Simple Syndication
SLC	Scan Line Corrector
USGS	United States Geological Survey
WRS	Worldwide Reference System